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LONDON GUARANTEE BUILDING
Michigan Avenue at Wacker Drive
THE HOME OF

finish

MONTHLY TRADE PUBLICATION
Established January, 1944
Published by
DANA CHASE PUBLICATIONS
360 North Michigan Avenue
Chicago 1
Telephone CEntral 6-1229

A trade publication devoted to the interests of the manufacturers of major home appliances and allied metal products. Covers plant facilities and manufacturing problems from raw metal to finished product, with special emphasis on metal finishing.

Free controlled circulation to management, purchasing, engineering and key plant personnel in companies intimately connected with the field covered. To others, subscription price $3.00 per year. Foreign subscription price (U.S. funds) $5.00 per year.

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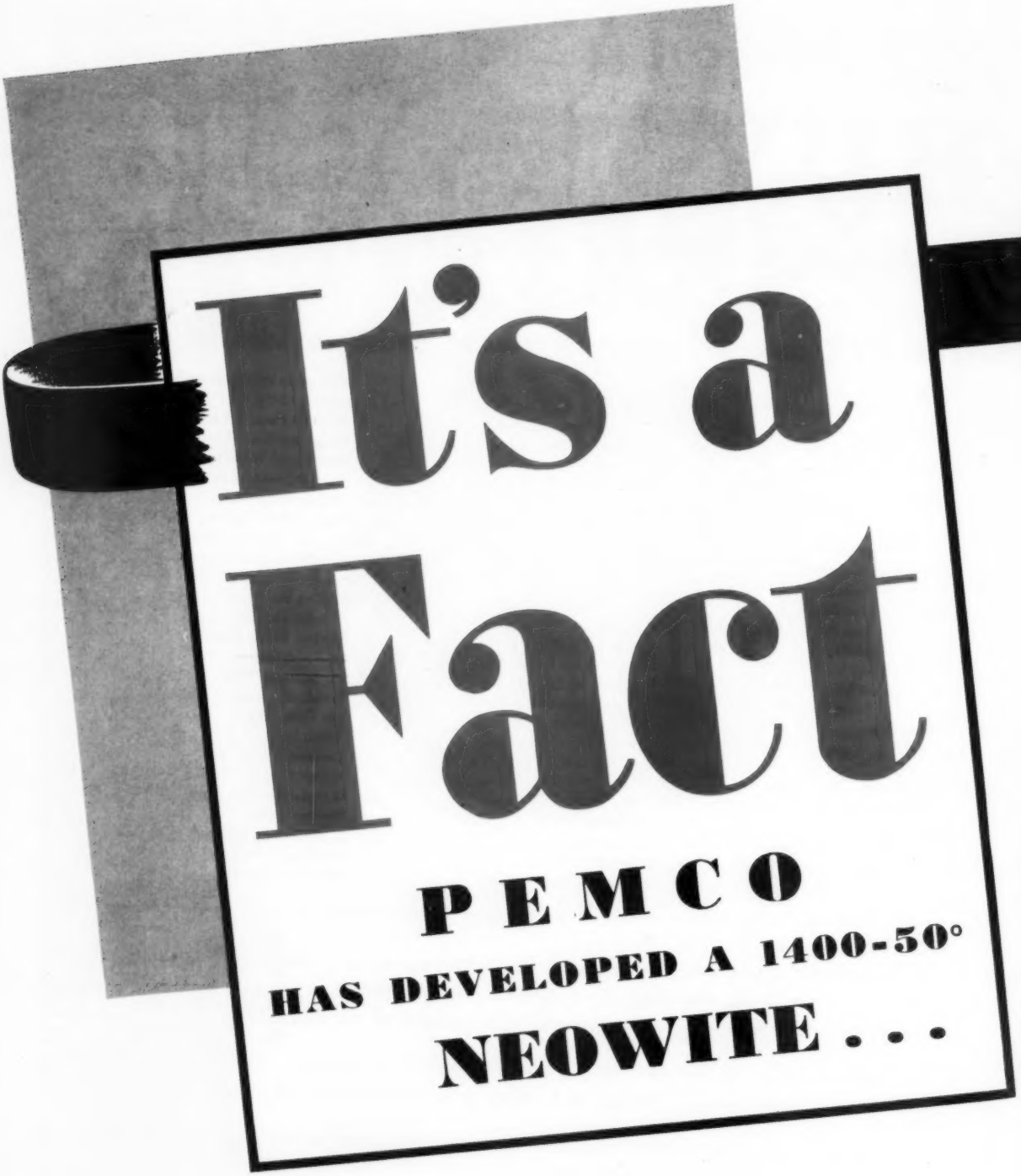
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Fact
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HAS DEVELOPED A 1400-50°
NEOWITE . . .

HERE'S WHY IT'S BEST . . .

PEMCO is offering a new "NEOWITE"—1400-50° "NEOWITE" and a corresponding ground coat—1400-50° GROUND COAT! Both are definitely NEW—created to supply the demand for trouble-free—dependable—superior low temperature enamels . . . TO ELIMINATE WARPAGE AND REDUCE SCRAP. Maturing at 1400-50°F. or 100° lower than regular enamels, it is our firm opinion that up to today they are the finest low temperature enamels available.

1400-50° "NEOWITE" IS ACID RESISTANT—Here is an enamel that is equal in acid resistance to any titanium finish regardless of temperature range or firing time.

COLOR STABILITY IS IMPORTANT . . .
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PEMCO'S 1400-50° "NEOWITE" is not a "prima donna"—1400-50° "NEOWITE" does not have to be coddled, for in addition to its low temperature advantages, it also possesses ALL the splendid characteriistics of regular "NEOWITE," including one fire, alone or with Pemco's NEW 1400-50° GROUND COAT. Nor is its application restricted to a particular finishing problem. PEMCO'S 1400-50° "NEOWITE" is a GENERAL ALL PURPOSE enamel.

ADHERENCE—1400-50° GROUND COAT—1400-50° "NEOWITE"—Starting with the ground coat we have yet to see a porcelain enamel finish with better adherence than either one of these new products. They are the tops.

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ARE LOWER TEMPERATURES DESIRABLE? UP TO TODAY—and we want to emphasize this time element—up to today we feel that Pemco's 1400-50° "NEOWITE" and Pemco's 1400-50° GROUND COAT are definitely better than finishes maturing at a lower temperature.

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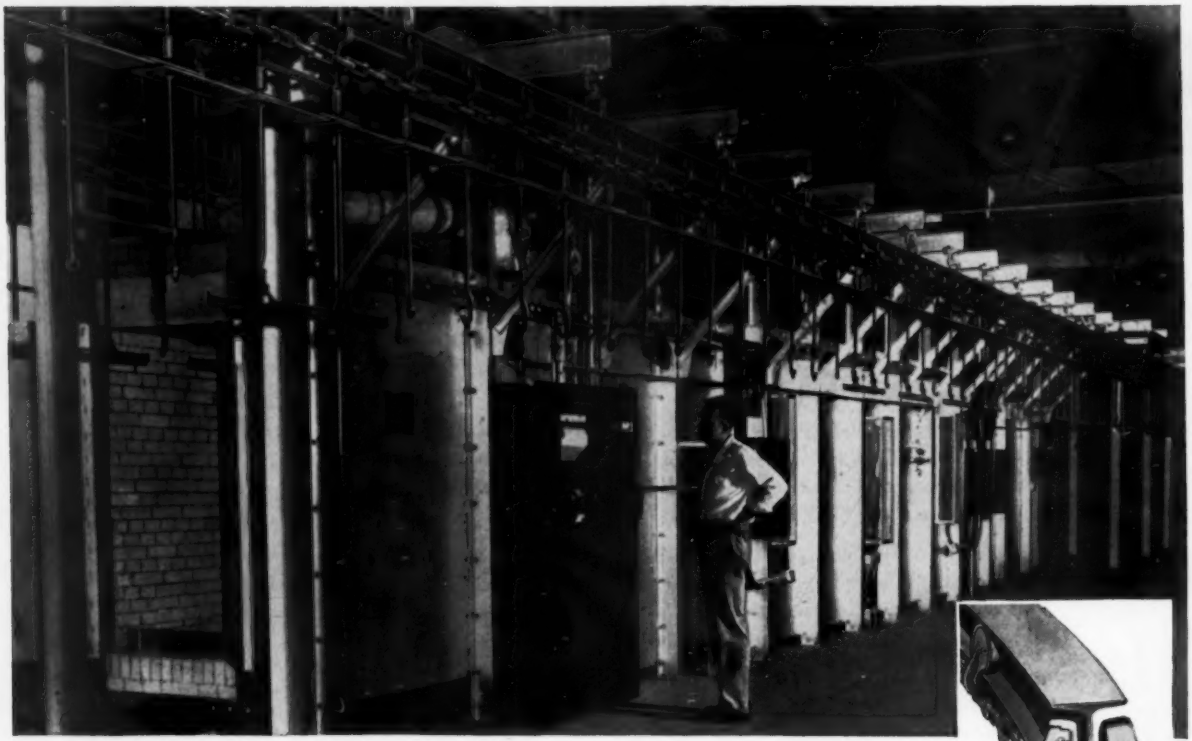
PEMCO CORPORATION

Baltimore 24, Maryland

Always Begin With a Good Finish

Handling a Hot Job
with LINK-BELT Trolley Conveyor



Link-Belt Overhead Conveyor Trolleys are the last word in rugged strength, simplicity, smooth operation. Note the construction, with drop forged steel wheels and brackets with full complement ball bearings operating in hardened steel races, assuring long life and trouble-free operation. For new or existing systems, Link-Belt Trolleys will give extra smooth, efficient service at lowest cost. Send for Folder 2241-A.

When engineers of Drever Company, Philadelphia designed the industry's shortest continuous furnace for American Valve & Enameling Company of Indianapolis, they specified a Link-Belt overhead conveyor for transporting the enameled pieces to be baked.

Space—an important factor in the 58 foot furnace — is conserved, because the conveyor is compact, overhead and out of way. Although the firing temperature is 1500 to 1600° F., the conveyor operates efficiently with a minimum of maintenance. The smooth jerk-free operation is essential to eliminate loss and damage in handling, and results in a high quality product.

Link-Belt power transmission with variable speed control permits changing the size of pieces to be processed from one square inch of light gauge to 32 square feet of heavy gauge in a matter of minutes. Considerable time is saved in changing to runs of varying sizes.

The wide flexibility of Link-Belt chains, trolleys, rails, and turn and drive equipment affords a simple and economical method of handling practically any type of material.

• A Link-Belt engineer will gladly offer suggestions on how you can solve your own particular conveying or power transmission problem. Consult your nearest Link-Belt office.

11,220

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OVERHEAD TROLLEY CONVEYORS

LINK-BELT COMPANY

Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Dallas 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices in Principal Cities.

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for quality and quantity of production—

. . . have been recognized as superior equipment for more than half a century by technicians and production engineers.

Used by leading manufacturers to meet today's demanding schedules.

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Dividends throughout the year from this investment

Do you operate a porcelain enameling plant? As a Business? As a department of a finished product manufacturing plant? — Do you use large quantities of porcelain enameled parts?

If your answer is *yes* to any of these questions, one of your first investments for 1949 should be in a Porcelain Enamel Institute membership.

The dividends start immediately and continue throughout the year — dividends in plant operation, dividends in testing, dividends in technical and marketing information. You will have the cooperation and backing of one of the country's strongest and most influential trade associations.

You get these dividends in return for your cooperation and a very modest annual investment in association dues.

This Emblem . . . . . designed by P.E.I. identifies products finished in genuine Porcelain Enamel. It sets these products apart as having the highest quality finish and guides the purchaser in making his selection. It is offered to manufacturers using genuine Porcelain Enamel as an important part of their product finish.

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2. COMMERCIAL RESEARCH COMMITTEE — market trends and opportunities.

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4. PROCESS DEVELOPMENT COMMITTEE — new developments, equipment and processes for plant operation.

5. FORUM COMMITTEE — develops programs of importance for annual forum for plant men.

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7. SALES AND MANAGEMENT CONFERENCE COMMITTEE — annual conference on selling methods and demonstration techniques.

8. PACKAGING AND SHIPPING COMMITTEE — Developing testing equipment standards for packaged products and coordinating information on the best methods for cutting shipping damage.

If you haven't applied for membership in the P.E.I., call your secretary now and dictate a note to —

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1010 VERMONT AVE. N. W., WASHINGTON 5, D. C.

Time-Proved for Economy

SOUND research, in-the-plant testing and laboratory checking at every phase of production *time-proves* all Century Frits. Each type of frit, whether for ground or cover coat, is checked in this manner to insure you complete satisfaction. Century's plant and laboratory experts take pride in their record of producing fine, time-proved frits for over 20 years.

This constant alertness means profits for you in fast, economical enameling operations . . . profits resulting from speed, fewer rejects, and neater overall appearance. You'll find it will pay to check Century frit in your plant. Write for a trial run today.

Enameling Job Orders

We have additional space in our plant at present for large or small job orders. Write or phone us today for complete information.

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FRIT from CENTURY
FRIT MASTERS

7 FT., 630 LB.

GIANT BAND SAWS

SHIP AT LOWER COST IN

WIREBOUNDS

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Wirebound engineers designed a special four-piece Wirebound crate that weighed only 128 pounds and permitted loading four extra units in a freight car. The Wirebound crate afforded even greater shipping protection to minimize damage in transit.

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Wirebound
BOXES & CRATES

SIXTY WIREBOUND PLANTS THROUGHOUT THE UNITED STATES

PHOTO a
Special interior packing fits snugly into place, provides added strength and protection.

PHOTO b
The Wirebound "mat" is wrapped around and closed, in this case by twisting wire ends.

PHOTO c
As a final operation the lid drops into position and is secured in a few moments.

WIREBOUND BOX MFG. ASS'N.
Room 1832, Borland Building, Chicago, Illinois

☐ SEND COMPLETE LITERATURE ☐ SEND A SALES ENGINEER

NAME POSITION

FIRM NAME

ADDRESS ZONE STATE

CITY PRODUCT

Count on a long, productive run when your mill is lined with McDanel Mill Lining Brick.

McDanel brick are *extra-fired* for complete vitrification. They're rugged, last longer and lengthen the time between re-linings.

McDanel Mill Lining Brick come in sizes to suit all mills, and, with McDanel Fill-In Brick, the mason's job is easier, faster, more economical.

Use McDanel Mill Lining Brick in your next re-lining job and compare the performance record. See for yourself how you can boost production yet cut costs on future grinding operations in all mills.

*** HAND ROLLED GRINDING BALLS**

Made from specially developed vitreous porcelain body and hand rolled for faster, uniform grinding. Mill tested and individually inspected before shipment to you.

*** MILL LINING BRICK**

Low in glass content, McDanel Mill Lining Brick gives maximum resistance to wear and long, satisfactory service. Complete size range to fit every size mill.

*** MILL HEAD ASSEMBLIES**

Be sure to specify McDanel Mill Head Assemblies on your new mills. No metal can contaminate your mill charge with these patented covers. They are tops for uniformity of batch and long service.

*** METAL COVERED GRINDING JARS AND MILLS**

Protected with heavy gage steel jacket McDanel Metal Covered Grinding Jars and Mills are easy to handle, easy to clean, discharge rapidly and stand up under long usage.

Specify

McDANEL

BRICK

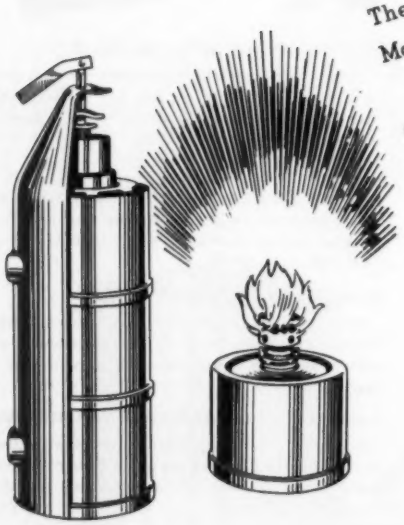
McDANEL REFRACTORY PORCELAIN COMPANY, BEAVER FALLS, PENNSYLVANIA
Chicago Vitreous Enamel Product Company, Cicero 50, Illinois
Exclusive Representative for the Enameling Industry

IN 1911, NEW MONARCH WAS BUILDING SAFETY LIGHTS FOR BUGGIES!

To protect slow-moving vehicles from the danger contingent with the ever increasing speed of the automobile, some state governments in those days found it necessary to compel buggies to display tail lights. These early, oil-burning lights were one of New Monarch's first stamping and assembly projects.

Today, New Monarch is still furthering the cause of safety. Since 1933, the Bolser flare—a highway safety signal light, made for the Bolser Corporation—has been produced as a complete unit in our plant—stampings, assembly, testing and packing for bulk shipment.

Many alert and progressive manufacturers are today availing themselves of our Complete From-Blueprint-To-Shipping-Carton Service, a most economical and convenient service, valued highly by our many customers.



When you think of Stampings, think of

NEW MONARCH MACHINE & STAMPING CO.

406 S.W. NINTH STREET — DES MOINES 9, IOWA

MONARCH QUALITY

New Monarch facilities can greatly increase your production. Our engineering staff is ready to help you with your problems in die-making, stampings, finishing, assembly and packing. Consult us about our Complete From-Blueprint-To-Shipping-Carton Service.

THE Finish Line

THE PAST FEW WEEKS – have been devoted to field trips through the Midwest and East in an effort to feel the pulse of industry as it is operating now, and as it looks into the coming months of '49.

We have talked with many manufacturers of appliances and allied metal products, including top management, sales and advertising men, and with advertising agencies.

A slow start

There is no news in the fact that at least the "pipelines" have been pretty well filled, down to the retail level, on most household products.

Another condition that seems quite general is that management policies, including sales and advertising programs, have been longer in the formulative stage this year than during any recent year.

This is typified by this issue of *finish*. For the first time in many months this publication will appear with less than its standard seventy-two pages plus cover. Look for next month (April issue), however, and you will see the biggest issue we have ever printed, except for one or two "special" issues. Inasmuch as the total number of pages is in direct relation to the number of advertising pages, it will be evident that many new advertising and promotion programs will have their inception in April.

If this were an individual case, it would mean little, but our survey would indicate that this is a very general condition in so far as a "late start" is concerned.

More pressure — not less

A slow start in either industrial or merchandising circles should not be taken as an indication of curtailed programs for the year. Everywhere we go there is a new realization that the "buggy ride" is over, and that the year '49 calls for a renewal of hard-hitting, dynamic sales and advertising programs all the way along the line, from manufacturer to consumer. In the case of consumer merchandise, much emphasis will be placed at the dealer level, in an effort to get the dealer and his salesmen tuned up to the kind of "door bell pushing" personalized selling that has been a lost art during the past few years.

If we see the picture correctly, you may expect to see more time, effort and money (the brain power has already been invested) spent during the balance of '49 than for some time past.

The market is still there

That tremendous "pent-up market" for home appliances and other consumer products is in large measure still "pept up" at the consumer level.

If we may use a personal reference to make a point, there is a definite market at our home for a new washing machine (automatic or otherwise) and a new range (gas or electric) as major items. But, will we go to the dealer's show room and ask, "Please, may we buy one?" Most certainly not. The dealer who sells these appliances will first find this prospect and then do a selling job before he gets the order.

Talk to your friends and neighbors and you will find this situation repeated many, many times.

Yes, the market is still there, and with an abundance of good "old-fashioned" selling backed by well designed advertising and promotion. It will be a *good* market for the progressive manufacturers and their selling outlets.

A common sense outlook

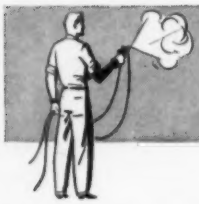
We have heard little "crying" among the manufacturers. Everyone had a good 1948 and, for the most part, producers are expecting "a little less business" — "just about as good" — or — "even better business" during 1949. Everyone agrees that to get that business will require much, much more in selling effort, and they are prepared to do a bigger selling job to keep the ball rolling.

So it may be expected that in many cases which appear to represent a "slow start," management has been taking a little extra time to smooth out the track so that the sales and advertising men can wind up their race with an extra strong finish.

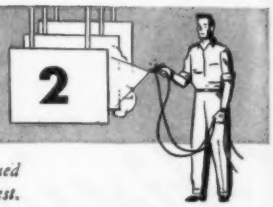
Dana Chase

EDITOR AND PUBLISHER

LORD HALL LIBRARY



Enameler's Data Sheet No. 2



An informative series on titanium-bearing killed steel for the enameling industry. Issued monthly by Inland Steel Company. Reprints of all data sheets are available upon request.

TITANIUM ENAMELING STEEL ELIMINATES NECESSITY FOR COBALT OXIDE GROUND COAT

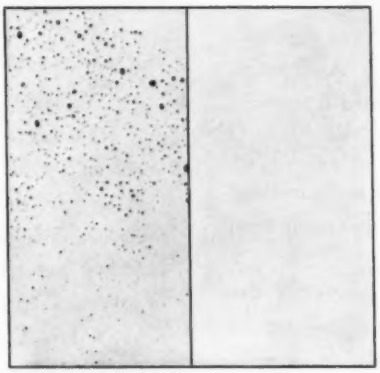
It is commonly known that white cover coats cannot be applied directly to mild steel or enameling iron and fired, because blackspecks, enamel pits, and enamel blisters make the resulting finishes unacceptable. These defective surface conditions are caused by gases which result from the reaction of carbon in the steel. Carbon is present as iron carbide, which, at enameling temperatures, is highly reactive with the iron oxide, hydrogen, etc., in the steel.

A ground coat of cobalt oxide enamel is therefore necessary before applying white enamels to ordinary enameling stocks. The cobalt oxide enamel is fired at a relatively high temperature, and much of the gases of reaction are driven off. Even so, frequently second, and even third coats of white enamel are needed to achieve a smooth enameled surface, because of the continued emission of gases.

Titanium Stops Gas Emission

In the production of titanium-bearing killed steel, titanium, added to the molten steel, combines with the carbon in the steel, theoretically in the ratio of 4 to 1, to form titanium-carbide (TiC). The titanium in effect "ties up" the carbon, so it is relatively stable at enameling temperatures and cannot react to produce the gases responsible for enamel surface defects.

Using titanium enameling steel, finishes with satisfactory reflectance, opacity, and hardness can be achieved with only one coating of white enamel. Frit manufacturers have developed cover-coat frits so highly opaque that satisfactory reflectance in the fired coating can be obtained with as light an application as twenty grams per square foot — a coating approximately .004 inches in thickness.



A single porcelain enamel cover coat applied directly to ordinary enameling iron (left) and to titanium-bearing killed steel (right).

Production Increased

The most obvious advantage of eliminating the ground coat is, of course, the higher production possible. With no addition of equipment, labor, or time, an enameling shop can turn out a larger number of units than by ordinary methods of enameling mild steel or enameling iron. In actual cases, this has amounted to a 30% to 50% increase in production, depending on the type of ware.

The use of titanium enameling steel also increases production by measurably reducing reoperations; many times as much as 50%. Enamel-shop scrap, moreover, is often reduced to less than one per cent of total production. Furthermore, it is not necessary to completely recoat a unit when surface defects arise. Specks or blisters need only be stoned, spot-sprayed, and refired.

The use of a single cover coat on titanium steel produces a thin enamel finish which needs no brushing or edging. Moreover, elimination of the cobalt oxide ground coat reduces cost of materials, and, in addition, reduces the over-all weight of a product so that its shipping costs are decreased.

Chipping Reduced

But probably the greatest saving made possible by titanium enameling steel — because of the thinner enamel coating — is the reduction in chipping. In actual practice it has been found that chipping is almost eliminated in both assembly and transportation, due to the much higher flexing and torsion really thin enamel coatings withstand.

The problem of chipping in the shop, in transit, and in actual use, will be further discussed in the next Enameler's Data Sheet.

Today's demand for TI-NAMEL greatly exceeds our ability to supply it. But we look forward to the time when porcelain enamelers everywhere can take advantage of this superior enameling base metal.

Inland Steel Company, 38 S. Dearborn St., Chicago 3, Ill.

SALES OFFICES: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis, St. Paul.

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TITANIUM-BEARING KILLED STEEL ENAMELING SHEETS

The Dudley Park Works of A. Simpson & Son, Ltd., Adelaide, South Australia, comprises 14 acres of building.

Appliance manufacturing in Australia

first hand information from another continent, including direct invitations to appliance and materials suppliers

WHILE we keep up with current problems in the United States—political, social and economic—through regular reading of our daily newspapers and periodicals—it is sometimes of interest to read news of trends and problems of manufacturers in other countries.

For a sidelight or two, we take you to Australia and the new Dudley Park Plant of A. Simpson and Son, Ltd., Adelaide, South Australia. *Finish* has been privileged to have as visitors during recent years three members of this organization—John A. Simpson, T. B. Simpson, and S. H. Dunstone.

The description can best be presented by quoting liberally from recent letters received by *finish* from John Simpson, associate director.

His references to labor conditions, Communists, titanium enamels, and appliance production figures strike an interesting note for readers.

Appliance manufacturers will be interested in the direct invitation for submission of licensing agreements. Note the reference to the "steel situation" and the interest in low temperature enamels.

13th December, 1948

"The past year has been a busy one for us all, but at this time, on the third anniversary of my visit to you in the United States, I would like to send my best wishes for the coming year and happiness throughout this festive Season.

"We in Australia have many production troubles,—steel shortages, lack of man power due to greater industrialization and lack of increased population, being the two most prominent; the Communists have control of some of our Trade Unions, and consequently in these unions there are frequent strikes and upsets.

"Fortunately, there are some bright spots on the horizon,—Titanium enamels are at last becoming available here, both locally manufactured frits and frits imported from England. Titanium Dioxide should be in plentiful production in Tasmania, our island State, early in the new year, and so one of our worries will be over.

"Our Company is now producing about 250 Washing Machines and 550 electric, gas and fuel ranges weekly. Besides these, we make smaller items, such as enamelled holloware, tinplate canisters, wood and iron bedsteads, etc.

"We have a Development Department planning new manufactures, and *I would be most interested to hear from you of the popularity in the States of such items as Food Garbage Disposers, Automatic Dish*

LORD HALL LIBRARY

Washers, Ironers, also Automatic Washing Machines and Clothes Dryers. I would also be very interested to hear of the relative popularity of the white finish on appliances versus the coloured finish.

"I mention in passing, that *our Company would be pleased to hear from anyone in the States who might wish to license their manufacture of one or more of the abovementioned items in Australia. . . .*"

14th January, 1949

"I should be very interested to hear of developments with the new 1300 degrees enamels, which I have read about in trade publications.

"In several letters I have had from the States in the last few weeks, I notice that the steel shortage seems considerably improved in your country. Here, it seems worse, with no prospects of an improvement until 1952, when Australia's first continuous rolling mill will start operating. Up till now, all our steel, except the small quantities we are allowed to import from U.S.A. and Great Britain, comes from small sheet mills in Newcastle and Pt. Kembla on the Eastern coast of Australia.

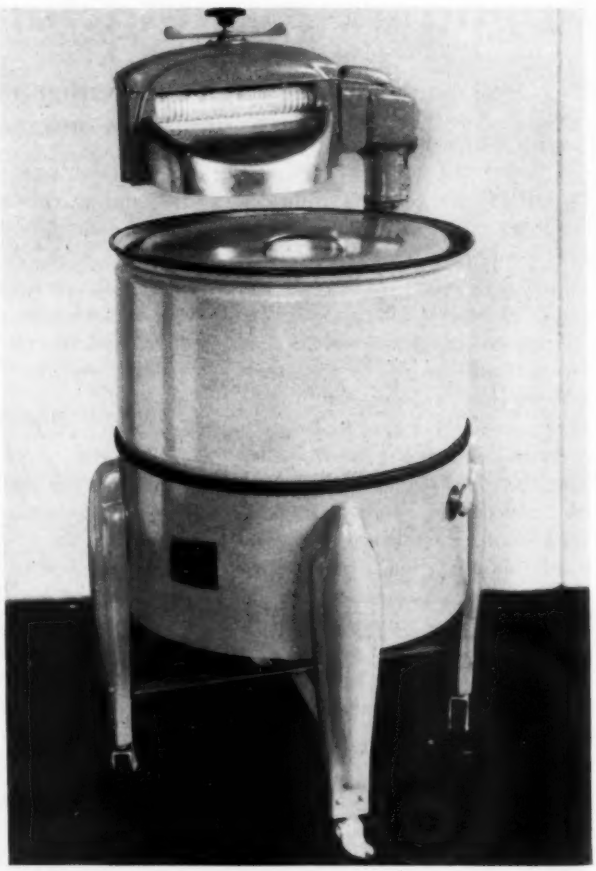
"Enamelling iron is not made thinner than 20-gauge, so that all holloware and light stove parts have to be made of hot rolled black iron. This does not help the enamel shop to turn out a 100% job, and so you can see we are interested in the low temperature maturing enamels which should help our shape problems considerably.

"We hope to increase our washing machine production to 300 a week early this year,—so far we have not gone in for automatic dish washers, automatic washing machines, or clothes driers, but we have paid some attention to these items with regard to producing one or all of them at some future date, when materials become more readily available.

"In the next 12 months a start will be made on our new mechanised foundry, which should greatly increase our production of wood fuel and gas ranges. . ."

John Simpson
Associate Director
A. Simpson & Son, Limited
Adelaide, South Australia

Above: The manufacturer's caption for this electric range reads "The modern porcelain enamelled interior (and exterior) enables easy removing of grease. Wiping with a damp, soapy cloth will restore its gleaming surface."



Right: A typical washing machine from the line of appliances of A. Simpson & Son Ltd. Note the use of the stippled "porcelain enamelled" tub.

A voluntary program

BY and FOR product manufacturers

a few reasons for, a brief description of, and benefits from participation in the national "safe transit" program

By E. H. Shands • DIRECTOR OF ENGINEERING AND DEVELOPMENT, GEO. D. ROPER CORPORATION, ROCKFORD, ILLINOIS

THE objective of every manufacturer is to deliver his product to the ultimate consumer in the same condition as when it left his assembly line. No manufacturer is ever entirely free of transit damages, although some manufacturers consistently keep their damage claims at a low level. Manufacturing organizations which consistently enjoy low damage claims are those which exercise eternal vigilance all the way from the engineering to the final shipping of the product, and exercise preventive measures rather than attempt to find a cure for the damage after it occurs.

Know the facts in advance of shipping

In the past, it has been difficult for a quality control or a final inspection department to be sure at all times that the product from the assembly line was in condition to reach the ultimate consumer without sustaining abnormal transit damage, even though past experience had been good.

Small variations in component parts not easily detected can sometimes be damaging. A few simple tests simulating transportation and handling shocks through which one can put one or more representative samples of the day's production have been most effective in locating strains and other weaknesses that could cause transit damage.

In order to satisfy need for simple tests of this kind, the Porcelain Enamel Institute, serving as coordinator for the National "Safe Transit" Program, has, through the Industry Packaging and Shipping Committee, issued the first set of test specifications for products weighing over 100 lbs. These specifications are designated as Project I of the Packaging and Shipping Committee and cover two simple tests—a vibration test and an impact test. The PACKAGED PRODUCT taken from the regular production off the assembly line, after it is completed and ready for shipment, is subjected first to a vibration test for one hour and, second, is subjected to an incline impact test.

finishfoto

E. H. Shands

Two simple tests (two man hours) tell the story

This constitutes the complete test cycle. It is not necessary that the article be watched during the hour it is subjected to the vibration test. The time actually required to conduct these tests which include loading on the vibration tester, unloading from the vibration tester, conducting impact tests, uncrating and inspection, is not more than one hour each for two men. Assuming the packaged article proves to be up to standard, the article can be re-crated and shipped. In case the PACKAGED PRODUCT tested does not stand up under the test, a second sample from the same assembly line should be tested immediately. If the second sample also fails, this is the signal that continued shipment of this article, without correcting the cause of the failure, may result in abnormal transit damage.

Tests specified in Project I are minimum requirements. Occasionally more severe tests should be conducted to determine how much of a safety factor is being carried. Indeed, sometimes an analysis of this kind may show that the article is over-packaged, resulting in useless packaging expense or that a more effective packaging can be designed for less money.

Suggestions for analytical testing

A recommended analytical or exploratory test is to subject the article to the vibration test at a frequency in excess of the "1 g" minimum for approximately 1½ hours. Then subject this article to the standard impact test; that is, place the article on the dolly setting normally on its base, and subject the 4 adjoining faces to the 5th zone impact. Repeat this cycle until each of the 6 faces have been on the dolly and the 4 adjoining faces subjected to impact. This will give 24 separate impacts. *It is well to remember that the vibration tests always precedes the impact test.*

It must be understood that this breakdown test is *not* a part of *any* specifications written by the P.E.I. "Safe Transit" Committee, nor does the committee contemplate writing

such a test into a specification. *Such a test is recommended especially on a new product in order to show up the probable weak places in the product or in the packaging* and, if the results of this test are studied carefully, will often lead to a more durable product as well as a reduction of manufacturing cost of the PACKAGED PRODUCT. A good example of endurance testing is proving ground testing carried on by automobile manufacturers. These tests have yielded information which has led up to more durable and economical automobiles.

Editor's Note:

In this article, Mr. Shands, who is chairman of the Technical Planning Division of the Coordinating Committee on Packaging and Shipping for the National "Safe Transit" Program, voices some practical reasons why *every* product manufacturer should participate in the program. He is in position to speak with authority from first-hand experience, inasmuch as the Geo. D. Roper Corporation has conducted an extensive packaging and shipping survey over a period of the past 15 years, and has employed the principles of the Project I specifications with profitable effect in this company work.

Many years of experience in shipping is represented among the manufacturer members and advisors of the committee. The result is a low transit damage for any manufacturer who will conscientiously follow the recommended "Safe Transit" testing procedure.

A voluntary program—no policing

Use of the "Safe Transit" specifications for testing PACKAGED PRODUCTS is purely voluntary on the part of manufacturers. It is recommended that these tests be run within the confines of the manufacturer's own plant. It is not intended that any outside inspectors be present to witness the test. The information gained should be used by the manufacturer to keep his transit losses at a low level. So long as transit damage runs high, there will be contention between manufacturers and carriers; also, so long as transit damage is high, it makes little difference to the ultimate consumer whether the carrier pays the claim or whether the manufacturer stands the loss—in either event, he pays for the loss, either in increased tariffs or increased price in the commodity.

The object of the "Safe Transit" committee has been to develop tests to which a PACKAGED PRODUCT may be subjected and which will insure the article reaching its final destination undamaged, with normal handling. Shocks prior, during, and subsequent to transportation were considered. Indeed, if only transportation shocks had been considered, the tests might have been less severe; but when total handling of the PACKAGED PRODUCT is considered from the time it leaves the manufacturer's assembly line until it reaches its final destination, experience has shown that the "Safe Transit" tests are minimum to yield satisfactory results.

The "Safe Transit" program was instituted to help manufacturers prevent transit damage to their products. All work by the industry associations cooperating in the program is voluntary and without remuneration. It is not intended by the committee that these tests be incorporated in carrier tariffs. They are for the purpose of helping the product manufacturer reduce shipping losses, improve packaging and shipping practices, and, where possible, reduce the cost of his PACKAGED PRODUCTS.

The "Safe Transit" program is as simple as A, B, C

A. **Each individual manufacturer producing a major appliance or allied metal product indicates to his respective association representative or association head office that he intends to participate in the "Safe Transit" program for the reduction of shipping losses.**

B. **Each individual manufacturer purchases or builds two simple testing devices—an incline impact tester and a vibration tester—and buys one piece of testing equipment for measuring severity of tests—or—he arranges with an accredited laboratory to conduct the necessary tests. Total purchase cost of equipment—three pieces—under $2,000. (Will be less if sufficient orders are placed.)**

C. **The individual manufacturer tests his PACKAGED PRODUCT, to determine shipability, prior to producing large quantities for shipment or placing in storage. (Periodic testing is also recommended for control purposes.)**

This simple A, B, C program can have but one result: Reduced shipping losses for each cooperating manufacturer and, as has been proved in many instances, a good chance of actually reducing overall PACKAGED PRODUCT cost. No one can lose! Let's all join up!

Send a YES vote to your association today!

How old are your burning tools?

including experience at California Metal Enameling Company, specialists in the production of traffic and commercial signs

THE question "How old are your burning tools?" is of significance to every plant operator employing high temperature finishes regardless of whether the production represents appliances, signs, reflectors, architectural porcelain or whatnot.

Age of the tools in use is not necessarily the important factor. Many tools will actually *last*, as far as their physical shape is concerned, long after they can no longer be correctly applied to the job to be done.

The questions of tool design, tool weight, and analysis are important and all too often do not get the attention they deserve. Plant research would indicate that many operators are using tools designed for the production of products long since obsolete. Many times new products of radically changed design and weight factors are put in production on the same old burning tools that have been in use for years, with little respect for tool design and less respect for tool weight.

This is not an appeal to scrap all burning tools that are old enough to have been amortized, but it is a suggestion that burning tool design be given greater attention by finishing plants in the light of the results that are often possible in better ware and reduced operating costs.

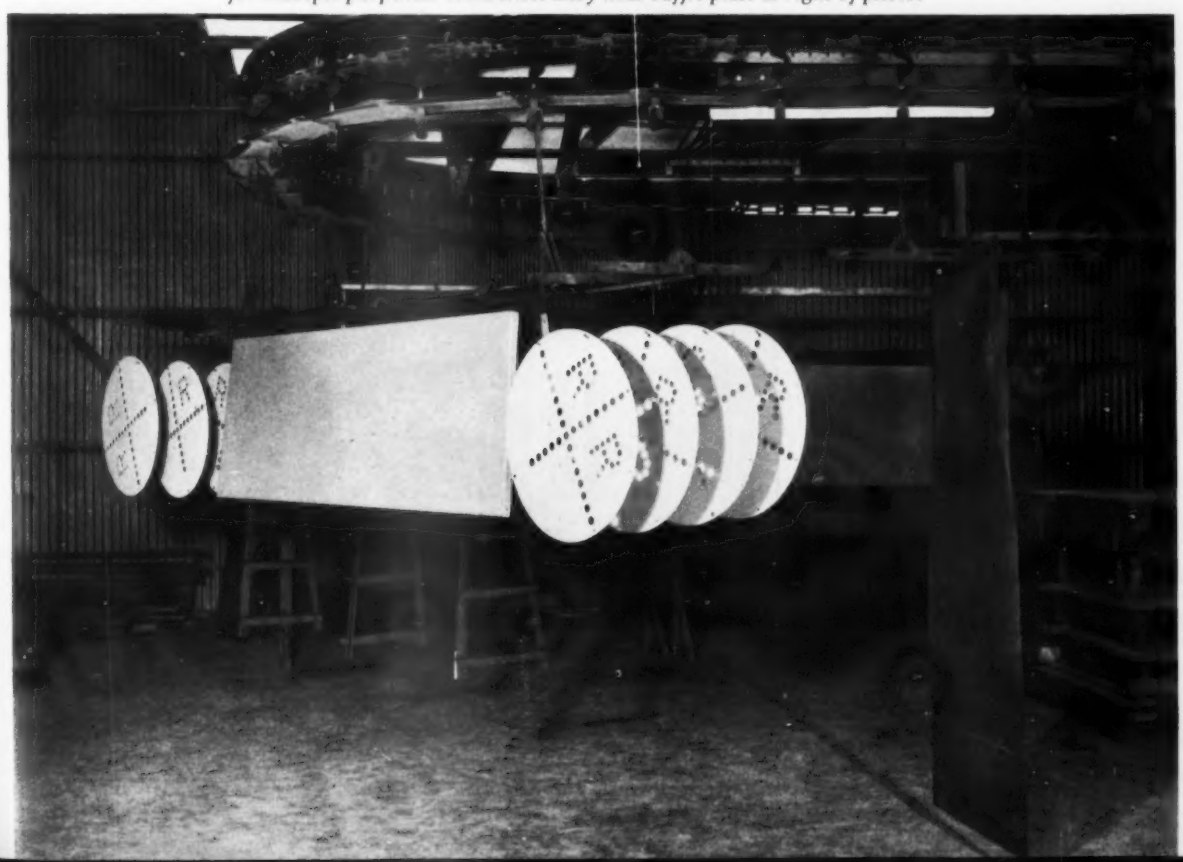
Better work at a lower cost may result

It has been proved many times that modern burning tools, properly designed for the job they are to do, can increase handling speed, resulting in labor saving; result in better finished work through elimination of ware damage from spalling and through a decrease in warping tendencies; lead to a speed-up in production, and/or reduced fuel consumption through an increase in the ware/tool weight ratio.

Types of burning tools

These general principles apply whether the tools are of cast alloy construction or are fabricated of heat resisting alloy sheet, bars, rod and wire. Both types properly designed and cast or fabricated of materials of proven formulae find their logical

Typical burning tools used for firing porcelain enameled signs. "A" frames visible below panel are used for multiple purposes. Note sheet alloy heat baffle plate at right of photo.



Above: Howard G. Burlingame, California Metal Enameling Co.'s ceramic engineer, inspects a support frame which has been in use for over two years. These frames are used with "A" frames to support large sign sections run through the furnace flat.

Right: This is an example of typical cast alloy tools of comparatively light weight as used for "low temperature" enameling at Lustron Corp., Columbus, Ohio. If "normal" enameling temperatures were to be used, a change in analysis would be recommended to meet the conditions of higher operating temperatures.

places in the high temperature finishing field.

Regardless of the type of tool, cast or fabricated, the analysis must of course be of a nature that resists oxidation *at the operating temperatures in use* (This point is important to a plant where both "low temperature" and enamels of "normal" or "high" firing temperatures are used) and eliminates any spalling tendency. Also of first importance is the ability of the tool material to retain its strength at the elevated temperatures and to resist distortion.

California firm meets special requirements

California Metal Enameling Company, CAMEO, of Los Angeles, specializes in the production of traffic and commercial signs and as a result is constantly faced with a multitude of burning tool problems.

With runs ranging from tiny emblems to sheets of 4′ x 10′, both single and double face, and almost every conceivable shape, CAMEO must be prepared, or know how to prepare quickly and economically, to hang almost anything on the conveyor line. And often the wide range must be put through the furnace in the same working day. Especially designed and in-plant fabricated tools have proved to be the answer to many of these problems.

These special tools are fabricated from high nickel-chromium alloy material. Although angles and flat bars may be used, sheets, rod and wire serve most purposes. Working properties of the alloy are similar to steel and the necessary tools for cutting and bending are therefore at hand in the sheet metal fabricating department.

Rods—wires and round bars—can be cut and bent into drops and hooks of whatever size and length desired. Wire up to 0.229″ diameter can be wrapped around its own diameter without fracture, and larger wire, up to ⅝″ rod, can be wrapped around twice its own diameter.

Sheets can be cut into strips and then bent into angles of any desired size. Where necessary, pieces may be crimped, or reenforced by welded additions of material.

CAMEO has found that 16 gauge sheets and ⅛″, 3/16″, and ⅜″ rod provide the stock for almost all of their special burning tools. They have also some small flat bars for long supports on which to hang a number of small items from hooks.

The material may be joined with any of the standard joining methods

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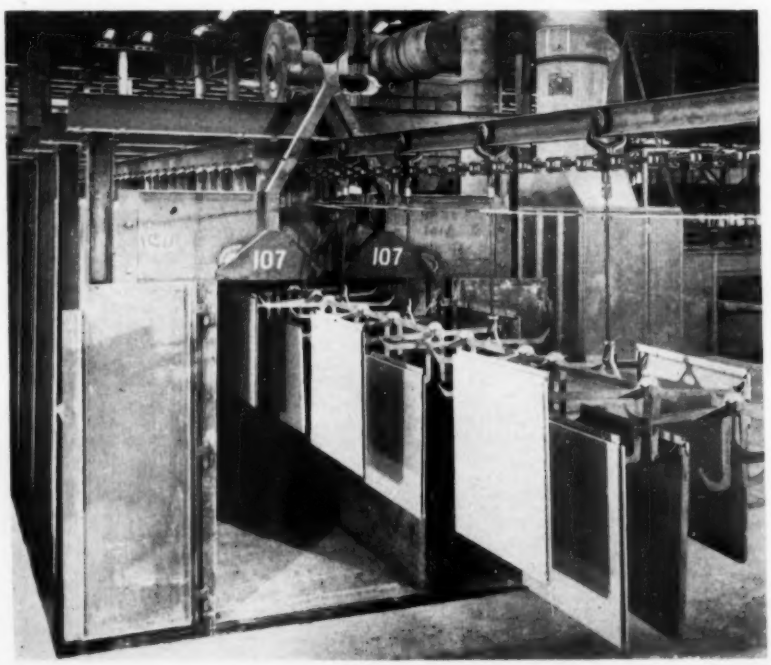


More news on the national SAFE TRANSIT program

LETTERS and other communications received by *finish* and by the Porcelain Enamel Institute, coordinating organization for the National "Safe Transit" Program, indicate a continuing acceleration of interest among manufacturers of finished products.

For the first time a definite workable program has been presented to industry which is simple in operation and requires a minimum of investment in test equipment. More evidence reaches *finish* every day covering loss reduction and, in many instances, manufacturing economies in the plants of companies who have used the equipment and principles of Project I in their respective plants. In future issues, we will carry first-hand information covering the work of individual companies who have been successful in minimizing shipping losses by this method.

Manufacturers being polled

As reported previously, association industry representatives or association offices are currently polling the individual memberships to ascertain the number of product manufacturers who are currently in position to "join up" with the "Safe Transit" program and put it into operation for its immediate benefits to producing companies.

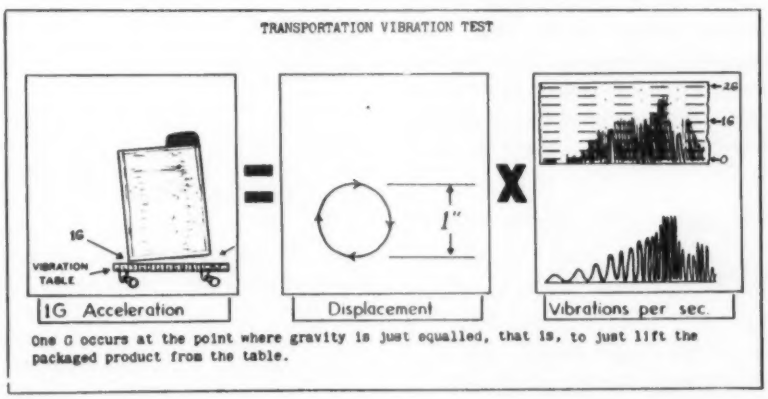
In a program as far reaching as is ultimately expected of the "Safe Transit" program, it may be logically expected that there will be diversity of opinion, false impressions, and possibly misconceptions of the ultimate aims.

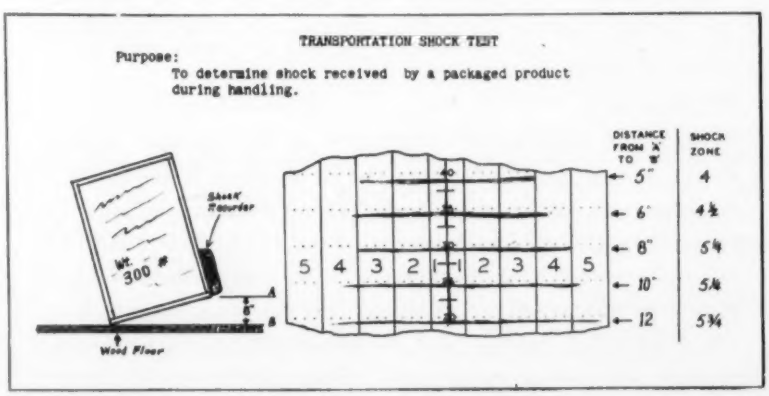
As was explained editorially in *finish* as early as July, 1948, there is no *single* cause for shipping damage, and responsibility in many cases is divided between product manufacturer, the carrier, and other "handlers" at points between the production line and the final consumer.

Clean all doorsteps

If the ultimate aims of the "Safe Transit" program are to be successfully attained, each segment in the chain of manufacturing, packaging, handling and shipping should avoid pointing the finger of blame toward other segments until its own doorstep is clean. For instance, it is frankly admitted by the railroads that much of their present equipment is in such condition that any shipment is likely to get a "rougher ride" than might normally be expected. *Finish* has presented evidence that *all* carrier groups are enthusiastically behind the "Safe Transit" program, and that they *have* agreed to institute every possible precaution. Specific instances of this cooperation will be presented in *finish* as they are made available. It will be clear, of course, that a complete replace-

"Your plan to reduce shipping damage to porcelain enameled products is bound to work if those participating will carry out your recommendations"—Read this and other statements from manufacturers using the recommended tests in letters immediately following this article.





ment of unsatisfactory equipment is not a problem for immediate solution.

To the manufacturer

It is equally clear that each individual manufacturer must continue to transport his products. Therefore, the first interest of each manufacturer in the present program should be in taking those steps within his own organization that will give added assurance that valuable finished products will reach their destination in usable condition. For any manufacturer who is inclined to point to the carriers or other sources of damage as an answer to excessive shipping losses, we suggest that first of all he see that his own doorstep is clean by adopting Project I. This will in a great majority of cases tell him in advance whether or not his PACKAGED PRODUCT as it leaves the assembly line is capable of withstanding *today's* "normal" transportation shocks.

It should be further explained that Project I represents minimum standards established by experts and proved through practical application in manufacturing plants. It does not take into account, as no practical program could, mishandling or accidental damage resulting from packages falling from excessive heights.

Any manufacturer adopting the "Safe Transit" program, and following its recommendations, may expect to greatly reduce any excessive losses and, in many instances, may find it possible to reduce the actual overall cost of his PACKAGED PRODUCT.

In addition to these direct benefits, the very fact that a manufacturer is using the formula of the program and applying the principles to his PACKAGED PRODUCTS will unquestionably place him in better position to negotiate when unavoidable damage claims are encountered.

You can build your own incline impact testing device. Get more complete information from the blue book, Project I, issued by the Porcelain Enamel Institute, 1010 Vermont Ave., N.W., Washington 5, D. C.

Explanation of Limits in Project I

Incline Impact Test

Testing of PACKAGED PRODUCTS on the Conbur incline testing device specifies that the tests shall be established to record into the fifth zone of the shock recording instrument. *(This is the approximate equivalent of placing a packaged appliance, such as a stove or refrigerator, in an upright position on the floor, and then tilting it on one edge so that the opposite edge is raised approximately eight inches above floor level, and releasing it so that it drops to its normal upright position.)*

It is reasonable to expect that some place between the production line and the consumer the package will be required to withstand this degree of impact.

Vibration Test

Testing of PACKAGED PRODUCTS on the vibration (vertical shock) package tester calls for a test of one hour duration with a vibration cycle equivalent of "1 g". This acceleration specification is just sufficient to equalize the weight of the PACKAGED PRODUCT as it rests on the vibration equipment. *(This specification is designed to simulate transportation conditions such as resonance, flat car wheels, rail joints, rough roadbed, and car side sway.)*

More interestin

A. J. Lindemann & Hoverson Co.

To P.E.I.

Enclosed you will find our ballot replying to your survey "Plan to Reduce Shipping Losses in Porcelain Enamel Products."

You might be interested in knowing that when we resumed the manufacture of electric ranges in 1945 we realized almost immediately that we were encountering damages to our product which had not existed in the same product and the same package prior to 1941. We suspected that we had encountered rougher handling in shipment to our product in 1945 than we had experienced earlier. Therefore, we set out to improve our shipping crate.

Recognizing that the Westinghouse electric range was similar to our range in its construction, we went to the Westinghouse plant and talked to Mr. Bisbee about their crate design. At this time we took our box maker with us to Mansfield to see the Westinghouse crate design and their method of testing crates. Mr. Bisbee gave us a very complete account of their experience with the "floating load" method of crating ranges. We also saw that Westinghouse used a Conbur tester and the vibration test.

We had always used the Conbur tester for our crate development work but no vibration tests had been applied to our product except those that were encountered in test shipment. After we purchased an L.A.B. vibrator we found that certain weaknesses existed in our product or its packing of which we had not been aware. The vibration test indicated that the "float load," accomplished through the use of built up padding, was the correct way to ship our product.

Since we have gone to the "float load," our shipping damage has been almost completely eliminated. We do

letters about the SAFE TRANSIT program

occasionally have enamel breakage but with the type of packing we use we feel that any damage encountered now is due to rough handling. Recently we acquired a three way impact recorder for checking rough handling in actual shipments.

Your plan for reducing shipping damage to porcelain enamel products is bound to work if those participating carry out your recommendations. I think that we have done all the things that you are recommending and our experience in reducing shipping damage has been very gratifying. We will be glad to cooperate with you in any way we can in carrying out your program.

R. H. Meiners
Chief Engineer

Philco Corporation

To P.E.I.

We have been interested in reading in several of the trade publications of the safe transit program developed by the Packaging and Shipping Committee of the Porcelain Enamel Institute.

Our company has for some while manufactured products in which porcelain enamel has been used for various of the components, and we have recently acquired, as a subsidiary, a company manufacturing porcelain enamel ranges, and are, therefore, even more particularly interested in the program of the Packaging and Shipping Committee.

We have for a considerable period utilized several of the various testing devices recommended for establishing the adequacy of packing and crating specifications, and our general test procedure employs the Conbur Incline Impact Tester and also the more recent Vibration Tester manufactured by the L.A.B. Corporation.

We are extremely anxious to keep damage in transit to a minimum, and are desirous of availing ourselves of all pertinent information and experiance which your Committee has developed, and would be glad to have you furnish us with such data as you may have available.

The writer also would personally like to become acquainted with the work of your Committee, and it is hoped that we may have an opportunity of discussing the safe transit program with yourself or some other representative of your Committee at some not too distant date.

J. G. Crowell
Packing & Crating Engineer
Appliance Division

Gas Appliance Manufacturers Association

To Finish:

Thank you for calling our attention through your letter of January 4th to your January issue and the extremely well prepared section on "The National Safe Transit Program."

Incidentally, we are now polling the domestic gas range industry which we represent and it is very evident that manufacturers, representing a very large production of the industry, are going to cooperate with this program. We feel that the publicity presented by you was most effective in influencing their decision.

Harold Massey
Assistant Managing Director

Enameled Utensil Manufacturers Council

To P.E.I.

The Council members were all given copies of the booklets pertaining to Project I and were in favor of this type of pre-shipment testing. The members, however, ship packages less than one hundred pounds, and, therefore, would not be covered by Project I. They agree in principle with the work of the Packaging and Shipping Committee, as evidenced by the appointment of Professor Petersen to this Committee.

We are looking forward to the development of Project I-A which will cover the testing of packages less than one hundred pounds.

D. S. Hunter
Hunter-Thomas, Associates

Project I-A covers packages of less than one hundred pounds. This project is now in its final stages of completion, subject to the approval of the Industry Committee.

Association of American Railroads

To Finish:

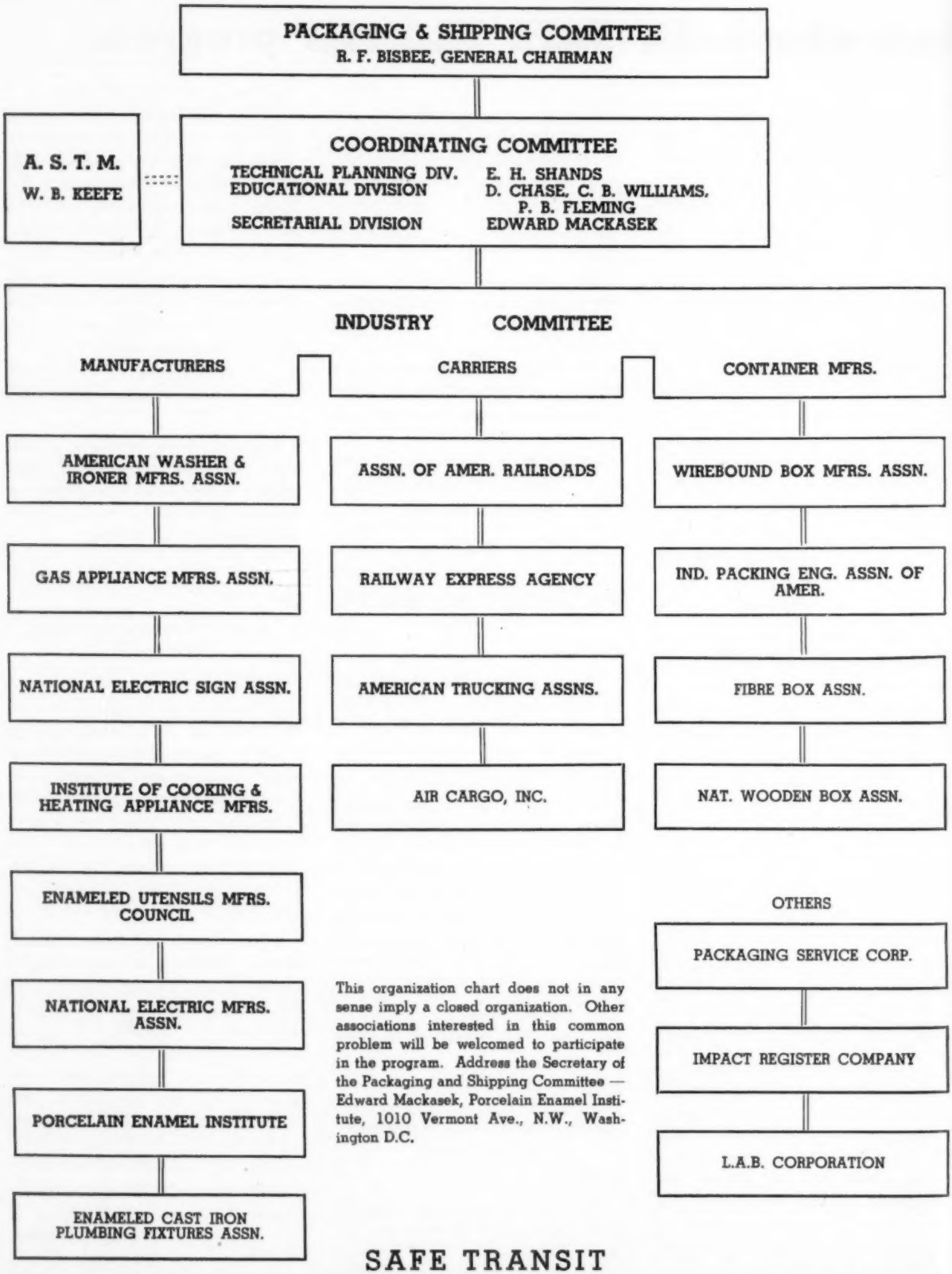
I appreciate greatly the chance to see a copy of the January issue of FINISH magazine, which you were good enough to send me with your letter of January 10, and have read with keenest interest the section having to do with the national "Safe Transit" program in which you are cooperating with the Porcelain Enamel Institute.

I note that Mr. A. H. Grothmann, former Secretary of our Freight Loading and Container Section, who has recently been transferred to our New York office, and Mr. A. L. Green, Special Representative of our Freight Claim Division, both of which are located in Chicago, have assured you of our earnest desire to help in carrying out this program. To theirs I add my own best wishes for full and early realization of its highly commendable objectives.

William T. Faricy
President

See latest organization chart →

ORGANIZATION CHART



This organization chart does not in any sense imply a closed organization. Other associations interested in this common problem will be welcomed to participate in the program. Address the Secretary of the Packaging and Shipping Committee — Edward Mackasek, Porcelain Enamel Institute, 1010 Vermont Ave., N.W., Washington D.C.

SAFE TRANSIT
FROM THE ASSEMBLY LINE TO THE FINAL CUSTOMER

It's SELL or else from now on!

economists are contradictory—but—salesmen can't afford to be confused

By Gene Flack • SUNSHINE BISCUITS, INC.

MANY economists are confused. One will say if taxes are reduced it would be one of the worst things that could happen. It would increase excess purchasing power, aggravate the demand for goods still in short supply, prices would rise still further, promote a greater inflationary boom and then eventual economic collapse. Another economist will say reduction of taxes is absolutely essential to prosperity, venturesome capital is necessary and surplus purchasing power can be siphoned off by the sale of peace bonds! That's typical of the contradictions that exist in the minds of many of our economists. Maybe they can afford to be confused, but the sales people of America can't afford to be confused; their companies, their industries, the American economy can't afford to have them confused.

If we are to maintain our present high level of employment and income and prevent a depression, we must sell the entire output of American industry. To do this our army of 10 million sales people have to KNOW the facts. Disregarding the points in conflict, here are 15 important factors in the situation upon which the leading economists of the nation seem to be in agreement. These are FACTS which salesmen can use effectively in contacting prospects and customers, and combatting the negative propaganda which is being wittingly or unwittingly spread by too many people.

These 15 points are as follows:

1. National income is still 224 billion dollars a year. In the depth of the depression in 1932, the entire national income totaled 38 billion dollars.

2. We now have the highest per capita purchasing power in dollars in our history.

3. The national income has a deeper and broader distribution — not as much money in savings banks, but the net worth of the average American is greatest of all time.

4. The demand for many items and services, particularly for durable goods, remains unfilled. For example, 10 million homes are still needed. Some 15 million automobiles are still wanted.

Editor's Note:

In February finish, The Finish Line (editorial) centered the spot-light on the necessity for "selling" major appliances and allied metal products under the heading "The Tobbogan Ride Is Over." While attending the annual meeting of the National Electric Sign Association we were privileged to hear Gene Flack, of New York City, sales counsel and director of advertising for Sunshine Biscuits, Inc., and immediate past president of the National Federation of Sales Executives, state with emphasis that prospects *are* good for a high rate of business *if* the nation's selling force gets back on the ball and keeps slugging.

We asked Mr. Flack to give us his "15 points" on which major economists have been willing to agree, despite the apparent confusion and contradictions emanating from their economic pens. These points should be of distinct interest to every *finish* reader.

5. Industrial production stands at 189% in comparison with the average of the years 1935-9.

6. Population has increased 8 per cent since pre-war.

7. Between 1940 and 1950 the nation is adding 15 million new families, with the greater market for goods and services that figure represents.

8. Sixty-one million are now employed, 15½ million more than pre-war.

9. The banking structure never was so strong. It is incapable of collapse.

10. Inventories are still comparatively small; there is no comparison with inventories after World War I.

11. Credit is abundant. Financing of purchases could expand the economy 2½ billion dollars without hazard.

12. Orders for industrial equipment are at high levels. For example, the steel industry has yet to spend 448 million dollars, the telephone company 200 million dollars in new plants and equipment.

13. Exports have shrunk — only because of lack of purchasing power abroad. The demand there is greater than ever. With the rehabilitation of the commerce and industry of Europe and Asia, we will enjoy the greatest export business in our history.

14. Some prices will decline, where costs of raw materials, wages and profits will permit.

15. There is an enormous need for public works, which provides a backlog in the event of any recession.

In reviewing what the war period did to the "crusading sales forces of America," we see that during the war many million salesmen forgot how to sell. Sales promotion managers became sales prevention managers, salesmen became allocation engineers, soda clerks became soda jerks, and department store sales people became business insultants.

A new sales force also has to be trained. Thousands of stores are operated by new owners and staffs, many unskilled and untrained in selling goods. In the food industry alone there are 300,000 brand new clerks.

America has never, in any peacetime year, sold the entire output of its production. With productive capacity increased 45% during the war, it means that year in and year out we will have to sell 45% more than

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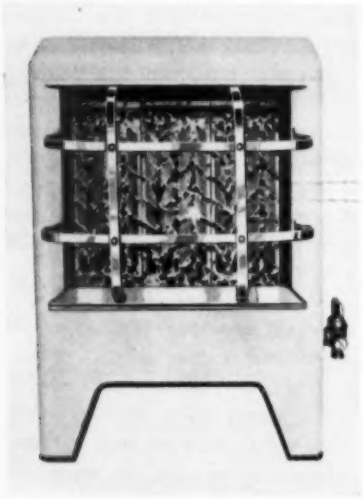
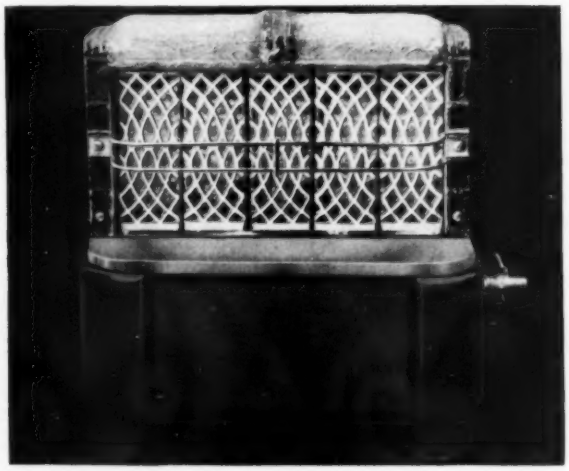
The logical finish

for gas-fired space heaters

A NUMBER of leading manufacturers of gas-fired home heaters have standardized on porcelain enamel as the practical all-around finish for their products. Not only is porcelain enamel now used for the exterior of a wide variety of radiant heaters, circulating heaters and bathroom heaters, but in some models it is used for the heat chambers and heat exchange systems as well. On the exterior it provides the *permanent* beauty which only an inorganic or ceramic type finish can assure. On the interior it serves as a rust and corrosion preventive, the only type of finish capable of resisting the high heat characteristics of modern room heating units.





The products of one of the manufacturers of all-porcelain heaters, Armstrong Products Corporation, of Huntington, W. Va., are shown on this page.

Armstrong Products Corporation started manufacturing gas heaters in 1931, and was one of the first manufacturers in the country to bring out a line of radiant and circulating heaters with cabinets and bases made of sheet steel. The heaters were designed for greater eye appeal, a substantial reduction in shipping weights, and retail price less than one-half of the prices of former cast iron models.

Outstanding features of the present line of Armstrong radiant and circulating heaters are:

Lifetime finish — porcelain enamel with chromium trim.

Modern designs.

Heavy cast iron burners.

Standard brass valves.

Armstrong is one of the lines being manufactured today which combines rich porcelain enamel, known as the lifetime finish, with chromium plate trim. The chromium plate is applied over a nickel base to not only give

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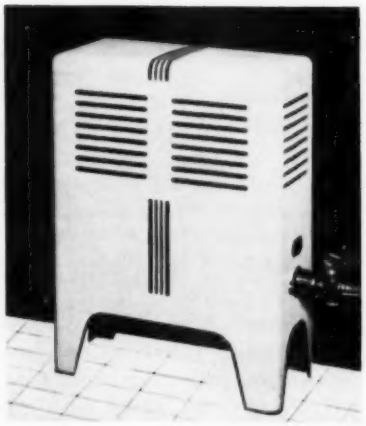

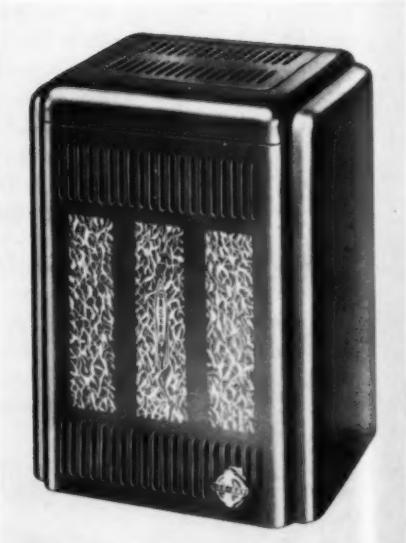

NESA holds third annual meeting

sign division of PEI meets to discuss major plans and problems

NEARLY 1850 sign men attended the third annual convention and exhibit of the National Electric Sign Association held at the Sherman Hotel in Chicago, January 31, February 1 and 2. Interest in the meeting was evidenced by the fact that attendance this year increased 50 per cent over the previous convention which was also held in Chicago.

Georgia man heads association

Jake C. Allen, Southern Neon Displays, Inc., Atlanta, Ga., was elected president of the Association at a business meeting held on Tuesday, second day of the convention.

Other officers elected were: vice president, Ludwig Trinajstich, Luminart Neon Co., Los Angeles, and secretary-treasurer, Harry H. Brown, Federal Enterprises, Inc., Chicago.

Maurice R. Ely will continue to serve as executive secretary.

The NESA board of directors for 1949 is as follows: Jake C. Allen; Ludwig Trinajstich; Harry H. Brown; B. J. Schneider, Philadelphia Sign Co., Philadelphia; Jess D. Traylor, Donnelly Electric & Mfg. Co., Boston; Harry F. Belsinger, Belsinger Sign Works, Baltimore; Sam Kamin, Neon Products, Inc., Lima, Ohio.

E. A. Long, Long Sign Co., Detroit; A. J. Mulholland, Mulholland Sign Co., Kalamazoo, Mich.; E. J. St. John, Duplex Advertising Co., Austin, Texas; V. W. Werr, Wallie Werr Co., Tulsa, Okla.; Ryland H. Walford, Walford Electric Co., Missoula, Mont.

R. A. Hoagland, Jefferson Electric Co., Bellwood, Ill.; R. N. Lambert, Corning Glass Co., Corning, N. Y.; E. R. Samuels, Tube Light Engineering Co., New York City; and Frank E. Montroy, Moore-Montroy Electric Co., Los Angeles.

Featured speakers at the opening session on Monday afternoon, at which Linwood A. Miller, president of Federal Enterprises, Inc., Chicago, presided, were:

Gene Flack, sales counsel and director of advertising, Sunshine Biscuits, Inc., Long Island City, N. Y.; John U. Aull, vice president, Swanson-Nunn Electric Co., Evansville, Ind.; and William J. Blommel, Jr., president, Blommel Sign Co., Dayton.

In his speech, "The Time Is Now," Flack stated although leading economists of this nation seem to differ on business trends, they all agree on 15 *facts* which company sales organizations should study in preparation of sales campaigns. *(See page 29 for Flack's 15 facts.)*

Market in selling added features

In "Selling an Idea," Aull pointed to the tremendous market existing in selling added features to already existing signs. His "message of resourcefulness" was illustrated with a number of slides.

"Building Local Business through Cooperation with National Accounts," was Blommel's subject. He asked the sign men to forget any negative attitude toward cooperating with other firms. Through a number of case histories he showed how one sign manufacturer profitably dealt with quantity-produced signs shipped into his territory. He also cited an instance where a customer hesitated to have the name and insignia of a well-known appliance manufacturer appear on his store sign, but was

During the NESA convention, the following members of the sign section of the Porcelain Enamel Institute attended a meeting at the Sherman Hotel: Front row — V. E. Messuer, Cleveland Porcelain; J. H. E. McMillan, Ing-Rich; W. F. Wenning, Ceramic Color; H. H. Wineburgh, Texlite; Edward Mackasek, PEI; N. Cannistroro, Bettinger Enamel; W. A. Barrows, Barrows Porcelain; and J. B. McMath, McMath-Axilrod. Back row — R. A. Anderson, Ing-Rich; D. C. MacDonald, W. & D. Agency; Hugh Mc E. Patton, Ing-Rich; George Sirovy, Century Vitreous; J. E. Ferguson, Socony-Vacuum Oil; R. E. Barnes, Texlite; J. R. Rayvid, General Porcelain; E. M. Hommel, O. Hommel Co.; J. W. Vicary, Ervite; O. W. Maddox, Texlite; G. E. McPherson, Carnegie-Illinois; Leonard Nachman, Seaporcel; and J. W. Holliday, Jr., Tenn. Enamel.

finishfoto

This contest design by Wayne P. Grubbs, of Electrical Products Corporation, Portland, Oregon, won first prize of $500.

very pleased later with the increased business brought through the display of the national appliance firm's insignia.

Sign contest winners announced

D. R. Swormstedt, vice president, Signs of the Times, then made the presentation of awards in the third electric sign design competition. (The design problem was a hardware store in an average community, thus presenting a practical problem confronting sign designers.) Cash awards totaled $1000, divided into a first award of $500, second of $200, third of $100, fourth of $50, and six honorable mentions of $25 each.

The first four prize winners were: First, Wayne P. Grubbs, Electrical Products Corp., Portland, Ore.; Second, E. Clinton Hewlett, Luminart Neon Co., Long Beach, Calif.; Third, Robert C. Carlson, Electrical Products Corp., Los Angeles, Calif.; and Fourth, Jack Harris, Flashtric Sign Works, Inc., Chicago, Ill.

The six honorable mentions were: Rudolph Gauthier, Federal Enterprises, Louisville, Ky.; Booth Yonka, Lackner Co., Cincinnati, Ohio; Reg. B. Roberts, Luminart Neon Co., Los Angeles; C. F. Barth, Jr., Federal Enterprises, Louisville, Ky.; Glen L. Guyett, Stalcup Neon Elec. Adv., Inc., Kansas City, Mo.; and John Billones, Stockton Neon Sign Co.

The sign contest board of judges included: W. A. Simpson, vice president, Flashtric Sign Works, Inc.; W. J. Sheely, merchandising and management service manager, National Retail Hardware Association; Mark Seelen, vice president and general art director, Outdoor Advertising, Inc.; Walter A. Taylor, director, department of education and research, American Institute of Architects; and Chairman R. S. Williams, general supervisor of sales promotion, International Harvester Company.

Monday's session was closed with a "Preview of Things to Come," illustrated with slides and narrated by H. B. Link, vice president and general manager, Bellows Electric Sign Co., Akron, Ohio. Some of the ideas included new erection methods of signs, storage of porcelain enameled signs, and movable dollies on which entire signs can be made.

Tuesday's sessions were devoted entirely to NESA business.

Featured speakers at the Wednesday's sessions, at which E. J. St. John, vice president, Duplex Advertising Co., Austin, Texas, presided, were: Willis Camp, general manager, Electrical Products Consolidated, Seattle, Wash., whose topic was "Why Lease?"; Milton Roseman, general manager, Triangle Sign Co., Baltimore, Md., whose subject was "Maintenance—Our Neglected Stepchild"; Nelson M. Wells, principal landscape engineer, New York State Dept. of Public Works, Albany, N.Y., whose topic was "The New York State Cooperative Plan on Outdoor Advertising"; and William J. Casey, chairman of board of editors and chief of Washington bureau, Research Institute of America, New York City.

PEI sign section meeting

On Wednesday morning, members of the sign section of the Porcelain Enamel Institute met to discuss (1) the Market Development program for the sign division, (2) competition

This design by E. Clinton Hewlett, of Luminart Neon Company, Long Beach, California, was awarded second prize.

Left, top to bottom: Howard Richardson, Mt. Vernon Sign Co.; Linwood A. Miller, Federal Enterprises, Inc.; E. D. Lamdin, Walker & Co.; and J. Paul Wilhelm, Southwestern Porcelain Steel Corporation.

finishfotos

Right, top to bottom: V. W. Werr, Wallie Werr Co.; C. S. Owen, Atlas Enameling Co.; Dave Swormstedt, Signs of the Times; and Jess Traylor, Donnelly Electric & Mfg. Co., NESA past president.

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from other materials, (3) market potentials, (4) the steel situation for 1949, and (5) color standards.

Edward Mackasek, managing director of PEI, led the discussion by picturing the sign division as the most stable branch of the porcelain enameling industry during recent years. During depression years, said Mackasek, the sign maker increased his service to the buyer and produced better quality signs. As one example of progress, he cited that from 1920 to 1930 a 30″ double face sign was considered "tough to make." This size was stepped up to 42″—to 48″—to 60″—and then to 72″. Now porcelain enameled sign makers develop more intricate shapes and use screen process for new designs and color effects. The sign manufacturer has started to realize that he should show the user how best to *use* his material, and also realizes the importance of better engineering and better architectural rendering. He cited today's important problem by saying, "We must learn how to *sell* porcelain enameled signs, and we must work cooperatively to offset 'big time competition'."

The next speaker to the group was Paul Fritsch, of The Goodyear Tire & Rubber Co., Inc. On request, he discussed the advantages and disadvantages of both porcelain enamel and plastics as a sign material. A few points from his interesting talk follow: To get the ear of top-flight executives (top brass) is a problem in many big companies. The Porcelain Enamel Institute, or similar cooperative organization, has the best chance for entree where constructive information is available. Today the

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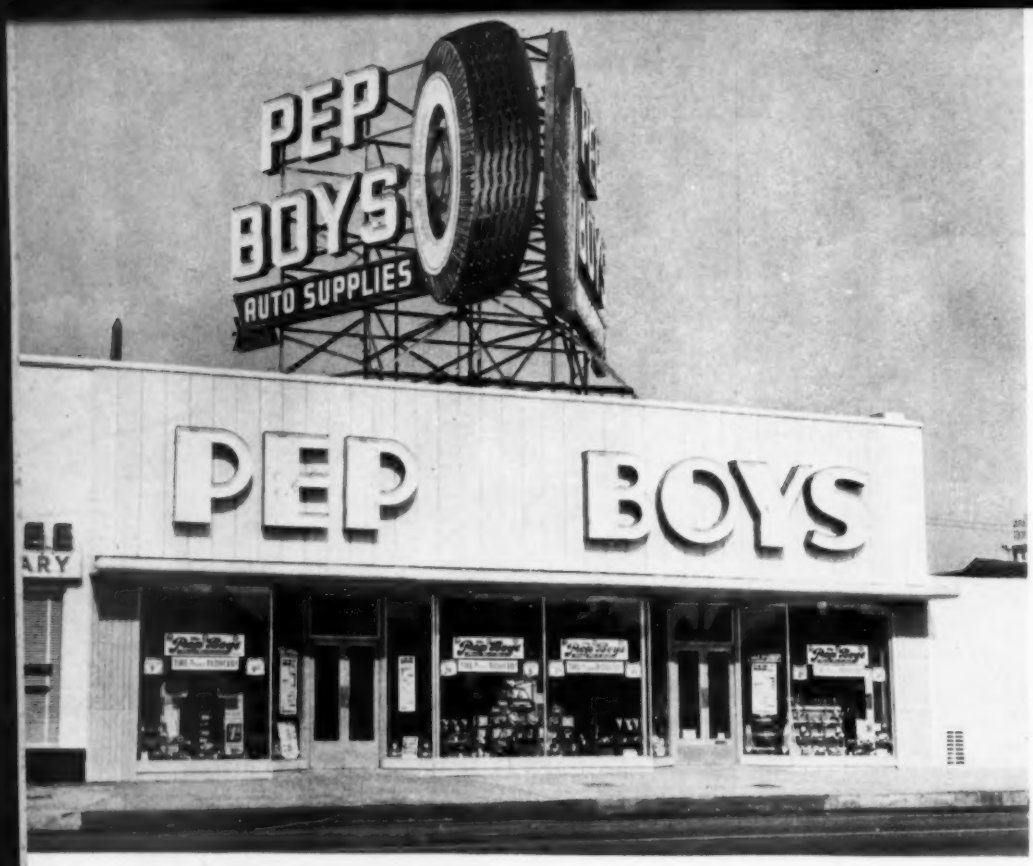

Pep Boys selected a two-tone green and cream stipple on 16 gauge iron for this store in Hollywood. Long narrow panels with V joints were used on the upper spandrel. Milton Anderson, architect. Porcelain contract by Vitracon Construction Co. Architectural porcelain by California Metal Enameling Company.

Is architectural porcelain enamel a logical building material?

the answer is YES, with the manufacturing qualifications outlined in this article

By Roy E. Dybvig • VITRACON CONSTRUCTION COMPANY, LOS ANGELES, CALIF.

Exclusive feature finish

My first experience with architectural porcelain enamel was in Chicago during the middle 30's. The job was an optometrist's shop. At that time the favorite store front "color" was black due to the favor enjoyed by black structural glass. The design was plain and we thought it would be an outstanding porcelain installation. The owner seemed satisfied, but we realized the many shortcomings of porcelain as an architectural material as it was then being produced in the enameling industry.

Since architectural porcelain came into use there has been a continuous period of trial and error in trying to produce a more satisfactory panel. The industry has progressed a long way and many of the architectural porcelain installations of today are comparatively free of the early objectionable features.

Every installation is either a credit or a detriment to the industry, and unfortunately there are still installations going up that are not a credit to the industry. Many architects hesitate to specify porcelain enamel as they have no assurance of a satisfactory job. They admit that many jobs are very fine, but they also point to the unsatisfactory installations they have seen.

How can good architectural panels be produced and how can bad installations be avoided? In trying to find the answer to these questions there are a number of factors to be considered such as the gauge of iron, shop methods, type of enamel, texture, and color.

The problem of "waviness"

One of the first problems to overcome was excessive waviness. Waviness is the one major objection that architects have to using porcelain. One of the first attempts at overcoming waviness was to veneer the panels under pressure with plywood or fiberboard backed with galvanized iron. This method was the first

big improvement in producing a better architectural panel, but it did not prove to be a complete and satisfactory solution. The practice had limitations and cost objections. No matter how much pressure was used or what practice was used for straightening the porcelain, if the panel was not reasonably flat before veneering it could not be made satisfactory.

For veneering to be effective 20 gauge iron was used and 20 gauge iron tended to increase the waviness over 18 or 16 gauge so that the improvement gained by veneering on the one hand was lost to some extent by using the lighter gauge iron. There was also the problem of having the veneering continue to be effective. There is always a certain amount of condensation between a porcelain panel and the wall structure and this moisture would in some instances break down the veneering, resulting in the panel returning to its original state of waviness. Then, finally, there was the objection of the additional cost and delay. As a result there was a gradual drift away from veneered panels and the industry concentrated on producing better panels that by themselves would be satisfactory.

The first step in producing a better panel was achieved by the use of heavier gauge iron in contrast to the 20 gauge iron used for veneered panels. Many of the 16 gauge installations without veneering had superior qualities to the veneered panels.

Shop practices are important

There are also many shop practices that have been used successfully in improving architectural panels. At the time architectural porcelain first came into use it was still a common practice to fire porcelain enamel ware on burning bars. No matter how well the burning bar points were aligned they would usually produce a certain wavy characteristic that was objectionable. For this reason it has become the practice to fire practically all architectural panels in a hanging position. The practice of spraying finish coat enamel on the back of the panel also definitely tends to produce a flatter panel. This practice is logical since much of the waviness results from the firing of the parts, and by equalizing the effect of the enamel between the face and back of the panel less distortion results.

Don't forget surface "texture"

Equal in importance with the improved methods of producing architectural panels is the improvement made in the appearance by the use of semi-matte and stipple finishes and textures. Regardless of any limitations of semi-matte finishes, they improve the appearance of architectural porcelain as evidenced by the growing demand for these finishes by the architects. The use of semi-matte enamels requires special care to achieve the desired effect. The semi-matte quality should be sufficient to eliminate the high gloss of ordinary enamels but the matte quality should not be sufficient to create a "coarse" surface. If the panel is too matte, it will collect surface dirt that will detract from the appearance and ease

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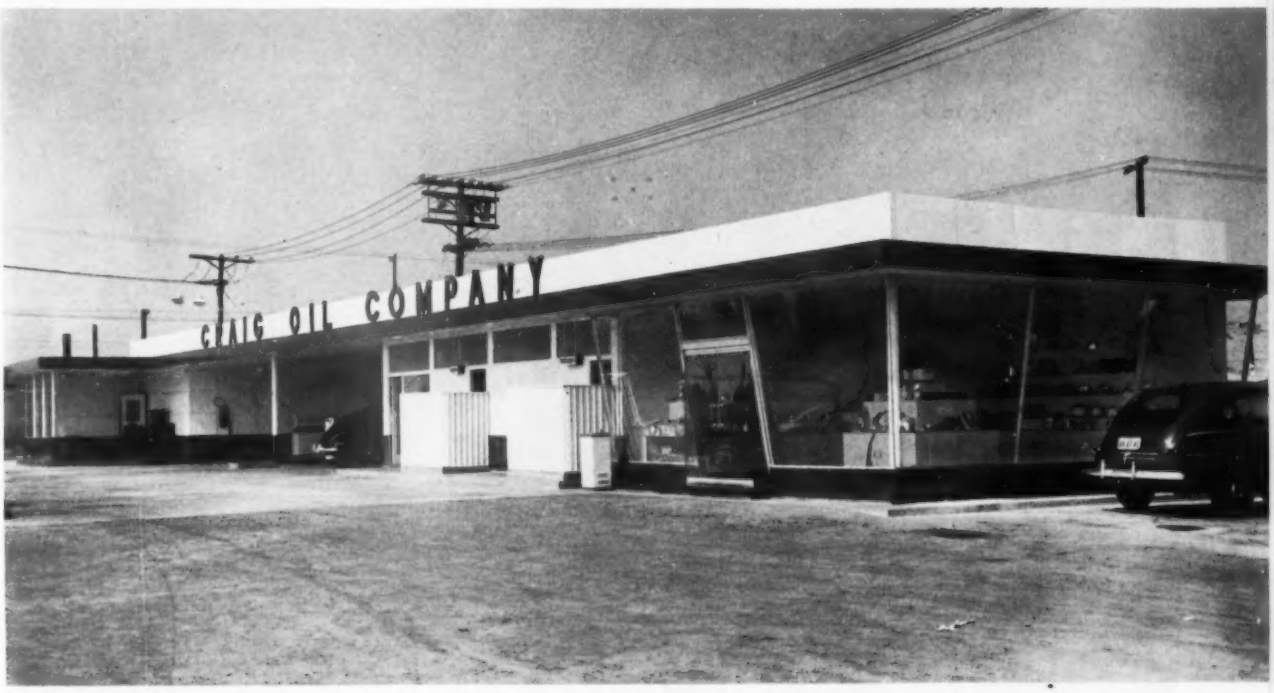
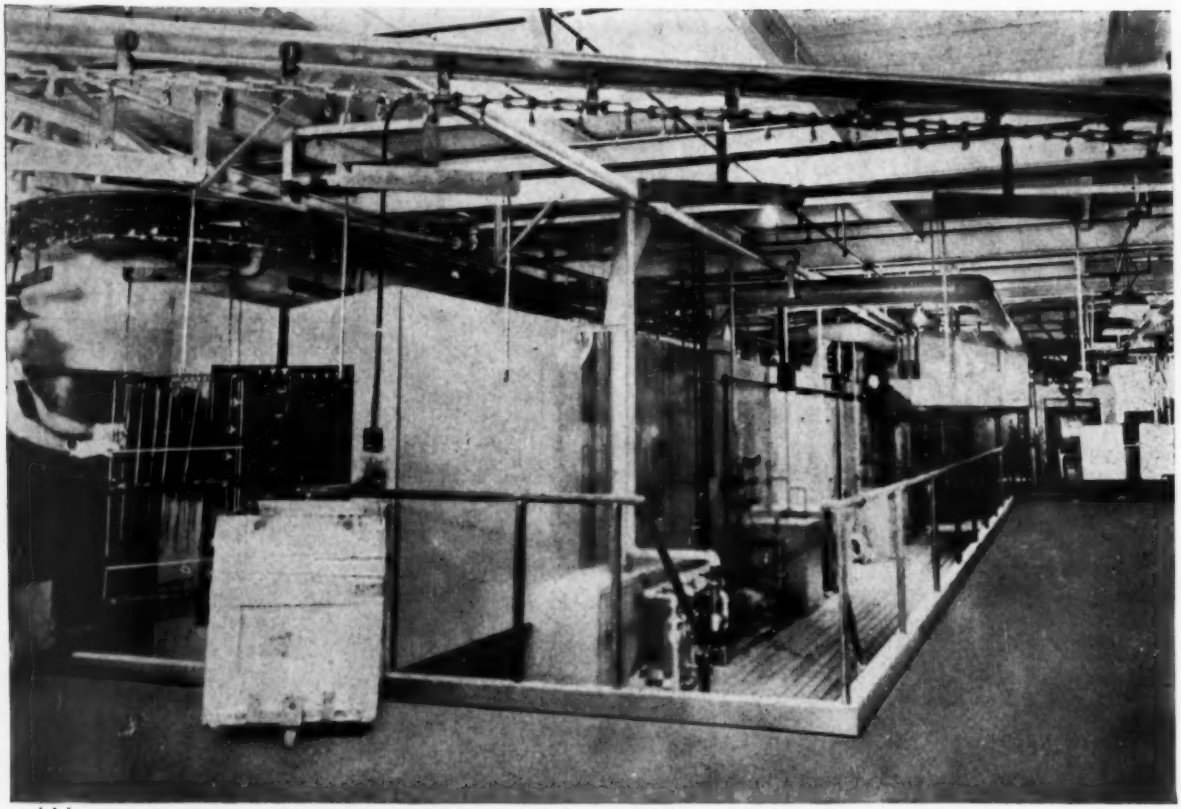


A smooth white and red gloss finish on 16 gauge iron was selected by Craig Oil Company for their station on Crenshaw Boulevard, in Los Angeles. Many oil companies prefer a smooth gloss finish as it gives their buildings an unusually "clean" appearance. Architectural porcelain contract by the author's firm. Porcelain supplied by Architectural Porcelain Constructors.

SPRAY PICKLING....

....FOR *BETTER* PORCELAIN ENAMELING



METALWASH Spray Pickler Cleaning Ranges in the plant of a leading manufacturer.

METALWASH SPRAY PICKLERS OFFER 5 ADVANTAGES

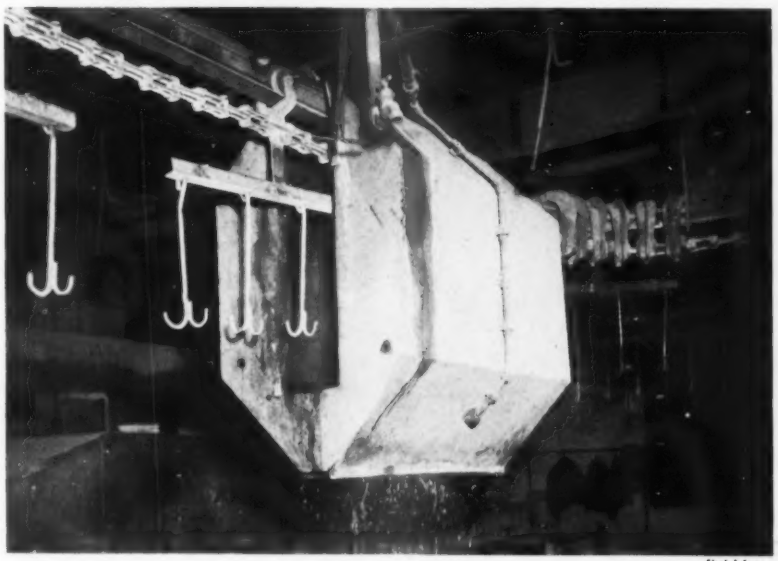
1. **Fully automatic machinery washes, rinses, pickles, nickel coats, neutralizes and dries all in one operation.**
2. **The exact cycle is automatically controlled, eliminating "human error."**
3. **Spray pickling is much more effective, spray rinsing more thorough and the ware does not dry between the stages of the cycle.**
4. **METALWASH spraying methods provide a continuously uniform deposit of nickel of thickness recommended by good practice, thus greatly improving adherence qualities.**
5. **Special housing design and effective exhaust venting eliminates obnoxious fumes and vapors.**

Contact METALWASH for Better Cleaning and Pickling prior to Porcelain Enameling.

METALWASH MACHINERY CORP.
149 - 155 SHAW AVENUE IRVINGTON 11, NEW JERSEY

SUGGESTION BOX

A practical washer for overhead conveyors



finishfoto

THIS suggestion represents a small piece of equipment photographed in the plant of Vitreous Steel Products Co., in Nappanee, Indiana. While simple in design, it does an efficient job of washing overhead conveyor tools, the job for which it was designed.

As Harold B. Gray, vice president and plant superintendent, told us the description of the conveyor washer is an easy one.

It consists of six small nozzles each with approximately an 1/8" orifice lined up in such a way that they impinge on the conveyor parts while the conveyor is running.

Water is taken at city pressure and stepped up to about 90 pounds through a small motor pump. About all there is to efficient operation is getting the six nozzles lined up properly so they hit the places that you want to clean.

The rest of the unit consists of a cover hinged at the top so that it can be swung up out of the way when not in use.

From the Editor's mail . . .

inspection system for enameled products

Gentlemen:

Being interested in the ceramic industry and especially interested in the porcelain enameling field, I appreciate the effort being made by FINISH magazine to promote porcelain enamel as a finish for metal. The campaign you have waged for more efficient packaging and handling has been fruitful and now at last the industry is awakened to the benefits that come with proper packaging and handling.

I would like to see a campaign waged to bring out the savings that would be effected, both by the public and the manufacturer, if the manufacturers would establish a good system of inspection of their enameled products. . . . I believe you will agree that when poor ware is passed it cannot aid in convincing the public of the superiority of enamel over organic finishes. When good ware is rejected the loss is not only suffered by the company but frequently by the public as well. For it is common practice to add another coat of enamel which tends to increase breakage.

Inspection standards need to be investigated, and sensible standards established. I was not thinking of standards of the type covered by Commercial Standard CS 100-47 "Porcelain-Enameled Steel Utensils" and similar publications but standards of appearance and dimensions. . . . The lack of standards can only be reflected in poor quality ware being placed on the market at a high selling price.

The inspection reports . . . are too frequently a waste of time and effort on the part of all concerned. It is not sufficient for the inspector to pass or reject items. If he is to be of maximum value, his report must show accurately the type of defect in order that this information may be used as a basis for corrective action.

I would also like to see some form of campaign started, possibly as a series of educational advertisements by manufacturers, as is done by other industries, to explain to the public how the layman can distinguish between good and bad enameling and also what porcelain enamel is and what can be expected of it as a finish. The way that some companies advertise enamel ware leads the public to false assumptions. For instance, one large mail order house advertises a product as having "three heavy coats." Naturally the public assumes that the more and heavier the coats the better the product. . . .

I would like to see enamel become regarded by the layman as "the lifetime finish" as well as by PEI, and feel that if the inspection standards and methods are improved upon it would go a long way toward making this claim a reality in the eyes of the public.

I believe that FINISH magazine, which has accomplished so much for the industry in its fairly short life.

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SNAPSHOTS AT CENTRAL ENAMELERS MEETING

finishfotos

Central district enamelers

discuss Lustron home

THE regular meeting of the Central District Enamelers Club was held on Friday evening, January 21, at the Allerton Hotel, Cleveland, Ohio. Chief speaker for the occasion was E. E. Howe, manager, ceramic division, Lustron Corporation, Columbus, Ohio.

Following the usual social hour and dinner, President John Lannan (Westinghouse) opened the business meeting. Paul Cecil, first vice president (Strong Manufacturing) reported on the recommendations of the porcelain enameling industry Coordinating Committee resulting from its meeting during the PEI Forum, University of Illinois. *(See December, 1948, finish, page 61.)*

Low temperature enameling

E. E. "Gene" Howe, well known to all enamelers present, was then introduced to present his subject, "The Lustron Program of Low Temperature Enameling." Following is an outline of pertinent data included under this subject:

I. Product Description (Enameled Parts)
  1. Quantity and Shape
     237 different piece parts
     2 sq. in. to 31 sq. ft in size
     1071 pieces per house
     Variety of shape: flats, box shape and semi-box, rounds, rectangles, rings, discs
     7615 sq. ft of surface
  2. Construction material
     Cold finished, low-carbon, oiled steel (auto body stock) 14, 16, and 20 gauge
  3. Finish requirements
     Protection for metal under sheltered (house interior) and exposed (exterior) conditions.
     Decoration for metal — color and texture, and color diversity.

E. E. "Gene" Howe finishfoto

Management Please Note

There is keen interest throughout the major appliance and allied metal products fields in the "low temperature" enameling systems such as the one described by E. E. Howe in his talk before the Central District Enamelers Club. There unquestionably has been rapid and important progress in the field of "low temperature" enamels during recent months. Experts in the ceramic finishing field expect that the downward trend in firing temperatures may bring desirable and permanent results of interest to all who operate porcelain enameling facilities. This leads us to a word of caution in this respect to top management.

First, the system in use at Lustron is designed to meet the problems of architectural porcelain enamel finishes in varied colors. Secondly, much work has been done, and is being done, to offer the advantages inherent in low temperature enameling to major appliance producers whose interests are primarily in white finishes with extremely high inspection standards. Thirdly, it is our opinion that the noteworthy developments referred to have not yet reached a stage where top management should *demand* of their finishing superintendent that production plans be changed to incorporate the new system. The alert finishing expert is keeping up with these newer developments, and will be ready to discuss them with management, but it will be well for management to be attentive to the recommendations of the finishing expert, for there are problems of product design, processing technique and equipment which must be considered for each individual plant.

II. Processing Methods & Equipment
  1. Metal preparation — Spray pickling method
     a. Capacity of one ton of steel per minute in two machines — Realization approximately 1100 lbs per min.
     b. Cycle (27 min.); Emussion cleaner (1 min.); Rinse (40 sec.); Alkali cleaner (1 min.); Rinse (1 min.); Sulfuric acid (3¼ min.); Rinse (1 min.); Nickel sulfate (4½ min.); Cyanide neutralizer (1 min.); Alkaline neutralizer (1 min.); and Drier (1 min.).
  2. Application methods
     a. Hand and automatic spray
     b. Dip and slushing
  3. Drying
     a. Direct fire-gas
     b. Pin lay down and monorail conveyor
  4. Firing
     a. Electric — 2 at 29,000#/hr., 11 ft. high, 180 ft. long, 4 ft. wide
     Gas — 6 at 19,000#/hr., 6 ft. high, 180 ft. long, 4 ft. wide, and 1 at 12,000#/hr., 4 ft. high, 137 ft. long, 3 ft. wide
     b. 1300° F. and 4½ minutes in firing zone
  5. Milling
     a. 22 mills ranging in capacity from 400# up to 7500#

III. Aspects of the Lustron Enameling Program
  1. Enamel physical properties to satisfy requirements.
     a. Interior — one fire mat —
     b. Exterior — AR mat over Gr. Ct.
  2. Major advantages distinctive of 1300° F. enameled parts

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→ *from Page 39*

a. Edge protection — reduced "burn-off" at edge
b. Minimum distortion — reduction in special bracing
c. Elimination of the "premium steel" handicap
d. Enameling cost reduction — tools, fuel, operations

3. Effect on the Porcelain Enamel Industry
   a. Produces an increased tempo in enamel development
   b. Revolutionizes formulation
   c. Exploits new materials
   d. Publicizes the material
   e. Affords an opportunity for expanded markets
4. Feasibility demonstrated: Over 1,500,000 sq. ft. run. Rework averaging less than 10%, which demonstrates that workability has not been sacrificed.

The lively discussion following the completion of Howe's presentation indicated the strong interest among enamelers in the low temperature program under way at the Lustron plant.

G.E. visit planned for next meeting

The program committee announced that the next meeting of the Central Enamelers Club will be held in Erie, Pennsylvania, on April 1. The program will include a 6:30 dinner, to be followed by a plant tour of the General Electric refrigeration and cabinet division and porcelain enameling plant.

How old are your burning tools?

(Continued from Page 24)

—lock seamings, riveting, bolting, or welding.

For the purposes of enamelers, since there are usually no great stresses, welds are not critical. In many instances tack welds are sufficient.

The material used by the California firm has a density of 8.51 gm./cu. cm. (0.307 lb./cu. in.) and a melting point of 2540° F. (1395° C.). Tensile strength per square inch is rated as:

1200° F.	72,000
1500° F.	26,000
1775° F.	12,125

Howard G. Burlingame, ceramic engineer at CAMEO, estimates that some specially designed burning tools weigh only 25% of crude poorly designed tools formerly used. Savings of 50% in weight are common, he says.

This great saving in weight of burning tools means that the ware-burning capacity of the furnace is increased by the amount of the saving. There is also a great saving in time and effort in loading and unloading the line. The light-weight tools are comparatively easy to handle in the loading. Lighter tools also cool more quickly for unloading the ware.

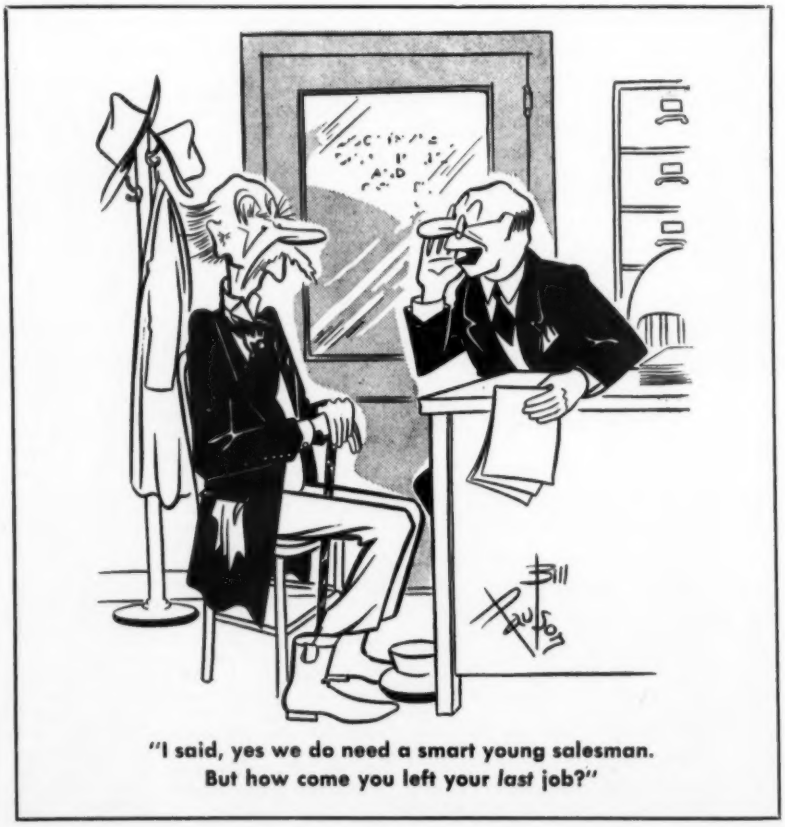
The problem of tools at CAMEO is under the direction of H. W. Niece, who sees to it that the proper tool of the proper material and design is available when a job is being run. Coat hangers and some support bars are of cast construction. Many of the tools are especially designed and fabricated to fit their "tailor made" products. They often design and fabricate tools for a particular job within a day. Tools do not always require complete re-design as it is sometimes possible to modify them.

A check up may pay dividends

If you run a variety of special work through your finishing plant, the plan used at California Metal Enameling may fit your picture.

On the other hand, if your production is standardized, day in and day out, the tailor made variety of tools may not be important.

In any case however, whether you use cast or fabricated tools and whether you can standardize or must have "special" tools, it will pay you to check your designs and ware/tool ratios if you haven't done so recently. It is entirely possible that some re-tooling in your plant may pay worthwhile dividends in quality and cost reduction over the "long pull."



"I said, yes we do need a smart young salesman. But how come you left your *last* job?"

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★

The national "Safe Transit" program for reducing damage losses to finished products in transit requires a study of proper packaging "from the ground up."

We offer the facilities of our modern research laboratory supervised by experienced engineers, without obligation, to assist in pre-checking or package research work. We are very anxious to help in the successful development of this program.

Protect those valuable finished products with the right box or crate. We manufacture all types of wooden boxes and crates and are therefore in position to recommend the most economical and best package for your product.

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It's SELL or else from now on!

(Continued from Page 29)

we have ever sold before in goods and services if we are to maintain 53½ million people in jobs, and maintain a minimum national income of 140 billion dollars. There are 140 million people in America; 140 billion dollars means the equivalent of selling $1,000 to every man, woman and child in this country every year. Figuring $5.00 as the average sale, it will mean making 10 billion more individual sales than have ever been made in any peacetime year in the history of this country. It will require 3½ million more sales people than have ever been employed in this profession. It will mean that you and I and our individual companies—if we are to do our share in maintaining a prosperous American economy—will have to set our sights at at least a 45% better selling job, and bigger selling job, than we have ever done before. That will take more salesmanship and better salesmanship by more salesmen and better salesmen, which will mean more selection and better selection, more training and better training, more supervision and better supervision.

But it can and must be done!

The logical finish for gas-fired space heaters

(Continued from Page 30)

a modern appearance, but also stand all types of atmospheric conditions.

There will always be a market for unvented heaters, particularly the radiant type for fireplaces, but in many localities vented circulators are growing in popularity.

Armstrong vented circulators are finished with porcelain enamel inside and out, meaning the outer cabinets and inner units or heat chambers. Many heater manufacturers do not use porcelain enamel at all; other manufacturers have the porcelain enamel finish on the outside cabinet only. "The chief advantage in having the inner or heat chamber finished in porcelain enamel is that this finish assures longer life and will prevent rusting or burning out," say the manufacturers.

"The baked on enamel will not hold up under intense heat, particularly in the case of circulating heaters. Also, the baked on enamel cannot be cleaned as easily or as effectively as porcelain enamel. The baked on enamel is baked on the metal at 350 degrees whereas the porcelain is burned on or fused into the metal at 1600 degrees."

All Armstrong heaters, with the exception of two low priced bathroom heaters, carry the approval of the American Gas Association. The majority of the Armstrong models are approved for all types of gases, natural, manufactured and LPG. The company first started manufacturing heaters for use with natural and manufactured gases, but in recent years has manufactured and sold many thousands of heaters for butane, propane and other LP gases.

Is architectural porcelain enamel a logical building material?

(Continued from Page 35)

of cleaning. Care should therefore be exercised in producing the right degree of semi-matte. A simple test is to make a pencil mark with an ordinary lead pencil and if it cannot be erased with the thumb with one stroke it is too matte.

Stipple textures have also contributed to the improved appearance of architectural porcelain. There are at present at least three different variations used, all of which produce interesting effects depending upon the taste of the architect. First a stipple finish may be in one color only by simply making the final finish coat a stipple texture instead of smooth. This simple one color texture is growing in popularity and is preferred by many architects. It overcomes many of the color matching objections that may result when several colors are used. The second stipple finish is produced by using a different color for the stipple coat. The third method is to blend several colors for the stipple finish. All these stipple finishes are effective, but the blending of colors requires special skill in selecting color combinations as well as special care in producing uniform panels. Stipple textures and semi-matte finishes give architectural porcelain the characteristics of a solid building material rather than a sheet metal veneer.

The most critical architects are now using semi-matte and stipple finishes on class A buildings whereas a few years ago they would not consider the material on first class installations.

If all Architectural Porcelain was produced with 16 gauge enameling iron (not cold rolled)—fired in a hanging position—reinforced on the back with enamel — finished with semi-matte enamels with a stipple texture—it would go a long way in gaining increasing acceptance as one of the very best materials on the market. Properly produced and installed, it is not only durable and easy to clean but superior in appearance, lending distinction to today's modern buildings.

"I say, old Chap, is he robbing the mail or did he forget a deduction on his income tax?"

REPORTS FROM THE FIELD

Many Porcelain Enamelers Prefer

TREOPAX Z
TREOPAX S
TREOPAX
for

Color Stability
Scratch Resistance
Opacity
Enamel Working Properties

The experience of users is a good yardstick for determining the worth of a product. Our Field Engineers report the following summarized statements from Superintendents in the Porcelain Enamel Industry:

TREOPAX Z "Very pleased with results...standardizing 100% on Z."

TREOPAX S "Doing a beautiful job on table tops and sinks."

TREOPAX Z "All white now being opacified with Z."

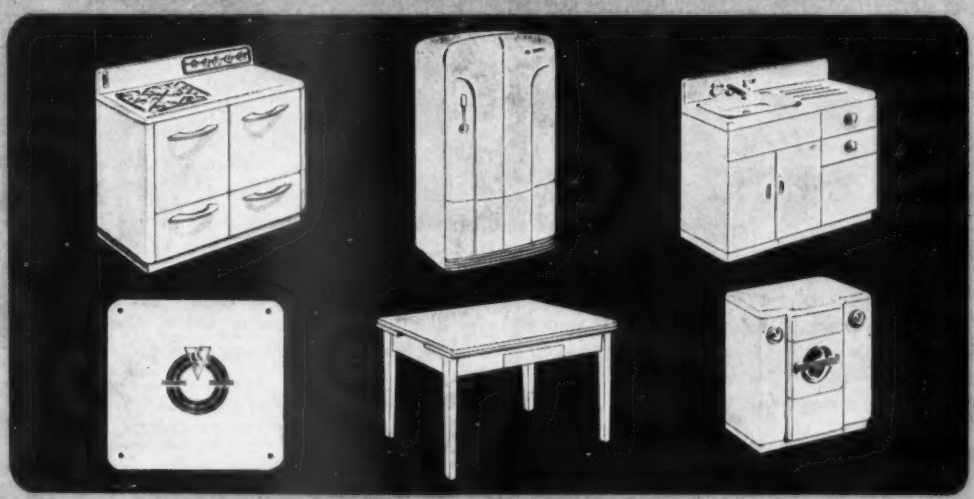
TREOPAX "Rates as the best opacifier made."

TREOPAX Z "Our standard opacifier in steel enamel."

TREOPAX Z "Giving excellent results in zircon enamel."

TREOPAX "Use being continued in cast iron and antimony AR."

Our field engineers are well equipped to discuss your problems. They can support their recommendations by laboratory data and by practical experience with shop conditions.



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When the total results are summed up, you have the reason why our customers say they save money by giving us their complete forming and enameling jobs.

If you prefer, we will, of course, take parts formed in your plant and enamel them. And remember: There's no extra charge for return truckloads of stampings for enameling.

Should your enameled parts need redesigning, look to us for assistance. Our 28 years of experience in the designing, forming and enameling fields are at your disposal. Send sample or blueprints today for estimates.

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NEWS

Norge personnel changes

The appointments of J. G. Elmore as plant manager and K. E. Anderson as ass't plant manager of the Norge range division of Borg-Warner Corp., in Effingham, Ill., was announced by H. L. Spencer, director of manufacturing. The appointments followed the resignation of C. E. Smith, former plant manager.

Elmore first joined the company in 1929 as foreman of unit assembly in the refrigeration division in Detroit. After serving in a number of managerial capacities, he was named superintendent of the Effingham plant upon its opening for exclusive range output in 1944.

Anderson joined the company as foreman of the specialty products department in 1933. He recently was superintendent of the newly-erected washing machine plant in Herrin, Ill.

Furniture Mart official dies

Herbert M. Poust, director of buyer registrations and purchasing agent for American Furniture Mart, Chicago, for nearly 25 years, died February 6 after an illness of several months. He was a graduate of Cornell University.

AWIMA display space at Edison Electric Institute

The American Washer and Ironer Manufacturers Association will have display space at the 15th annual sales conference of the Edison Electric Institute, April 5, 6 and 7, at Edgewater Beach Hotel, Chicago. Between 600 and 800 personnel of electric utility companies are expected to attend the meeting.

Francis Davidson dies

Francis S. Davidson, founder and president of Davidson Enamel Products, Inc., Lima, Ohio, died January 25. He founded the company bearing his name in 1924, and was one of the industry's earliest proponents of architectural porcelain enamel. For many years Davidson Enamel has been one of the country's leading manufacturers of architectural porcelain enamel.

Pemco adopts pension plan

An employees' retirement and pension plan has been established by Pemco Corporation, Baltimore, Md., manufacturers of porcelain enamel and other ceramic finishes, according to Richard H. Turk, president.

The Union Trust Company of Maryland has been designated as trustee of the pension fund to which contributions will be made by the company and its employees. Included in the plan are provisions for retirement of employees at the age of sixty-five, and elective retirement for those who have completed 20 years of service when they reach their fifty-fifth birthday. Karl Turk, Jr., treasurer of the firm, was appointed administrator of the trust.

PEI annual forum scheduled for mid-September

The 11th Annual Forum of the Porcelain Enamel Institute will be held September 14, 15 and 16, at Ohio State University, Columbus, Ohio.

The Forum is an educational service to the industry, and is designed to keep the men responsible for shop operations and product quality fully posted on the latest technical developments and processing techniques. It is attended by key shop personnel throughout the United States and many foreign countries, and also by suppliers of materials, equipment and others interested in porcelain enamel developments.

Final figures on utility gas sales for 1948

For the year 1948, total sales of gas utilities to ultimate consumers amounted to 32,532,544,000 therms, an increase of 9.1 per cent over the 1947 total, according to an American Gas Association report. The Association's index of total gas sales on December 31, 1948, stood at 217.3 per cent of the 1935-39 average.

Annual store modernization show set for week of June 19

"The Retail Store of the Future" will have its 1949 preview at the 3rd annual International Store Modernization Show the week of June 19, at Grand Central Palace, New York City, according to John W. H. Evans, managing director.

This year the Show will again hold a national competition among Chambers of Commerce in America for the

"Best Modernized Store of the Year." It was pointed out that store modernization is an annual billion dollar business in the United States because the nation's 1,750,000 stores are striving constantly to attract new customers.

Admission to the Show will be only by invitation, obtainable from exhibitors, or from Store Modernization Show Headquarters, 40 East 49th St., New York 17, N.Y.

Appointments at Hotpoint

Hotpoint, Inc. has announced the appointment of Edward R. Taylor to the post of manager of market development. John E. Bogan was appointed merchandising manager, the position formerly held by Taylor. Formerly the national sales consultant to the American Gas Association, Bogan recently headed marketing for a mid-west range manufacturer, it was stated.

Mid-winter meeting of industrial furnace builders

About 90 representatives of nearly 50 of the leading industrial furnace, oven and burner manufacturers attended the mid-winter meeting and IFMA award banquet of the Industrial Furnace Manufacturers Association, Inc., at Hotel Statler, Cleveland, January 24-25.

The four principal purposes of the meeting were:

1. To discuss the mobilization plans of the industry with Lee Wilson, industry advisor appointed by the National Security Resources Board.

2. To hear an analytical report on the financial statements of anonymous companies of the industry, by Arch M. Raub, manager of Dun & Bradstreet's special information division.

3. To discuss safety regulations for the installation and operation of industrial burners and ovens with J. B. Smith, engineer of the Associated Factory Mutual Fire Insurance Companies, Boston.

4. To discuss current industry problems in separate group meetings.

Cary H. Stevenson, vice president of Lindberg Engineering Co., and IFMA president, presided at the meeting and was toastmaster at the award banquet. Henry M. Heyn, Surface Combustion Corp., presented prizes to the successful contestants in the contest for best articles published in the trade press during the year ending September 30, 1948, on the economies effected by the use of modern industrial furnaces, kilns, and ovens.

It was announced that the IFMA 19th annual meeting will be held May 16-18, at Cavalier Hotel, Virginia Beach, Va.

100 years experience in ceramic field

The O. Hommel Company, Pittsburgh, Pa., made its annual presentation of service emblems to employees recently. Shown in the photo are, left to right, Ernest Hommel, president, congratulating R. H. Urbach, treasurer, and W. E. Dougherty. The combined experience of these three men in the ceramic field totals 100 years.

Awards were presented by Hommel to Urbach for the latter's 45 years with the firm, and representing the longest company service record, and to Dougherty for 30 years of service. Hommel wears a 25-year service emblem.

The practice of presenting emblems of service was started in 1938 by the late Oscar Hommel, founder and president of The O. Hommel Company. To date, 133 service emblems have been awarded.

Service pins were presented to the following: J. R. Deschler, S. C. Davis, A. E. Couch, Eugene Erhart, J. F. Smith, Mrs. G. G. Pfeil, Mrs. S. K. Openbrier, J. M. Walsh, and G. J. Nowakowski.

Steel plumbing fixture capacity reviewed for war-time conversion

Metal fabrication facilities of the steel plumbing fixture industry could be quickly converted 100 per cent to war production, spokesmen of the Steel Plumbing Fixture Division of the Porcelain Enamel Institute told the National Security Resources Board during a recent meeting in Washington, D. C.

J. P. Rodman, of AllianceWare, Inc., and J. E. Lynch, of Norris Stamping & Mfg. Co., said that the industry was highly flexible with respect to metal fabrication and that this phase of its operations could be wholly converted in a very short time.

Meeting with the NSRB to determine the part it will play in case of a national emergency, the group unanimously agreed with Board representatives that the confusion characterizing industry adjustment to war-time conditions during World War II could be substantially reduced in case of another conflict if industry were allowed greater participation in

developing the regulations controlling its operations. J. P. Kottcamp, NSRB representative, said that the Board would work under that assumption in organizing an industry "task force" to effect instant mobilization of the country's resources in the event of another war.

The group agreed that, in case of emergency, production of bathtubs, sinks, and other conventional plumbing ware products should be immediately curtailed to whatever volume might be required for hospitals, the Army and Navy, replacements for destroyed areas, and essential civilian use—overall total production to occupy a relatively small part of the industry's full capacity.

When asked for recommendations regarding production limitation orders, all members of the group said that there should be one limitation order only— not tied in with those of other government departments or divisions so that its application would become difficult or impossible. They also recommended that the government be full responsible for furnishing all materials involved, independent of priorities or the manufacturer's individual ability and ingenuity.

H. C. Beresford, of Murray Corp. of America, emphasized that in order to prevent the breaking up of efficient production teams, which occurred during the last emergency, there should be close coordination of effort between all branches of the plumbing industry. To accomplish this, Kottcamp suggested the appointment of a coordinating committee composed of representatives of the Steel Plumbing Fixture Division, Enameled Cast Iron Sanitary Ware Producers, the Vitreous China industry, and brass fixture suppliers.

The steel plumbing fixture industry "task force" will submit to the NSRB a complete report of its current status, potentialities, problems and recommendations. The report will be prepared by Edward Mackasek, managing director of the Porcelain Enamel Institute, and will be supervised by Mr. Rodman.

Attending the meeting were Mr. Kottcamp and W. R. Crowe of NSRB; Messrs. Rodman, Beresford, Lynch, and Mackasek; E. P. Calkins, of General Porcelain Enameling & Mfg. Co.; and J. F. Wright, of Speakman Co.

Midwest regional gas sales conference in Chicago, March 28-30

More than 800 representatives and sales executives of gas utility and gas appliance companies are expected to attend the Midwest Regional Gas Sales Conference sponsored by the Residential Gas Section, American Gas Association, at Edgewater Beach Hotel, Chicago, March 28-30. A program has been designed to accentuate the need for the gas industry to increase its sales and promotional effort to meet the rapidly increasing competitive drive for the domestic market.

New Pennsalt district office

The Pennsylvania Salt Manufacturing Co. has announced the opening of a new district sales office in Appleton, Wis., for its Heavy Chemicals Division. C. H. Anderson, of Pennsalt's Chicago office, was placed in charge as district sales manager.

Erie Enameling displays at Materials Handling Show

A progressive step in the promotion for the use of porcelain enameled metal for materials handling was taken by the Erie Enameling Company, Erie, Pennsylvania, through their employment of an exhibit at the Third National Materials Handling Show at Philadelphia in January.

Erie was reported to be the only enameling company represented at the show. Their exhibit consisted of a porcelain enameled background, porcelain enameled hood with fluorescent lights inside, photographs showing practical applications, and actual samples of porcelain enameled parts. These samples included two types of grain spouting, three types of pipe, Saunders type valve, elevator buckets, idler roller, tractor muffler, dry cleaner transfer chute, and miniature coal chutes.

The theme of the exhibit was the education of visitors in the solution of corrosion, abrasion and gravity flow problems. It was reported that there were approximately 200 exhibitors at the show, with equipment valued at several million dollars. One estimate of attendance was 17,500.

(For specific information on porcelain enamel for materials handling, see R. W. Brownfield's article, "How Porcelain Enameled Chutes are Revolutionizing Materials Handling," July, 1948, finish.)

Final 1948 factory sales figures for washer-ironer industry

Despite a year-end letdown which cut December's factory sales of stan-

dard size household washers to 183,700 units, or a decrease of 42.4 per cent from 319,300 in November, the total for 1948 was an all-time high of 4,317,183 washers, according to industry-wide figures announced by the American Washer and Ironer Manufacturers Association.

December ironer sales totaled 26,000 units, compared to 42,000 in November, down 38 per cent. The year's total was 476,860 ironers, a decrease of 20.4 per cent from 599,258 reported for 1947.

General Box appointment

The appointment of Joe Stoneking as advertising and sales promotional manager was announced by N. W. Embry, president, The General Box Co., Chicago manufacturers of shipping boxes and crates. Stoneking has spent 16 years in industrial and sales promotional fields.

Philco engineering appointments

Frank D. Peltier has been appointed director of engineering, appliance division of the engineering department, Philco Corporation, it was announced by David B. Smith, vice president – research and engineering. Peltier, with Philco since 1939, is said to be responsible for the development of the company's refrigerators, home freezers and air conditioners.

In addition, Smith announced that three chief engineers have been named to head principal appliance design groups, namely Theodore W. Rundell, in charge of design engineering of refrigerators; Matson C. Terry, in charge of developing single-room air conditioners; and Edward L. Hart, acting chief engineer, in charge of new developments in the engineering of home freezers.

Crown Stove man on Furniture Club board

C. R. Cook was elected president of the Furniture Club of America, an organization of more than 5000 members and the largest trade organization of its kind in the country, the club announced.

Other officers elected were T. J. Connelly, 1st vice pres.; E. R. Cervan, 2nd vice pres.; Chas. A. Gutsell, Jr., 3rd vice pres.; and Col. Lawrence H. Whiting, treasurer. W. C. Gorgas was reelected secretary.

The organization has a 24-member board of directors, including 18 new manufacturer and retail members representing all branches of the home-furnishings and furniture industry throughout the country. J. J. Bates, of Crown Stove Works, Chicago, is one of the manufacturer board members.

Donald W. Graham has been appointed district sales manager of the Heavy Chemicals Division of Pennsalt to take charge of their Cincinnati office, it was announced by R. S. Roeller, Division sales manager.

Ing-Rich employees receive service recognition

Employees of Ingram-Richardson Mfg. Co. with 25 or more years of continuous service received special recognition at a dinner given in their honor. The awards were presented by J. Fred Ingram, company president.

Seventy-six diamond studded gold service pins were presented to Ing-Rich (Beaver Falls, Pa.) employees who will complete 25 or more continuous years of service this year. Of these, nine men and women received, in addition, watches suitably engraved in recognition of more than 40 years of service.

In addition to the company's co-founder, Ernest Richardson, who has 47 years to his credit, the others with more than 40 years of service are: G. A. Daniels, B. F. Carothers, Chas. Frederick, J. H. E. McMillan, Wm. Schuler, Harry McClane, Jos. Rolingon, Wm. J. Tress, and Agnes L. Strub. Daniels' award was presented to his son, G. A. Daniels, Jr. who succeeded his father upon the latter's death last year. Ten employees, whose years of service with Ing-Rich totals 436, received gold watches as a special recognition.

Plans were also started for the formation of a Twenty-Five Year Club by 76 employees whose combined service totals approximately 2300 years.

Minnesota Mining promotion

The promotion of Donald G. Ferron of the research staff in the chemical and color division has been announced by Minnesota Mining & Mfg. Co. Ferron will be chief process engineer and coordinator on the company's "Krox" color pigment project, it was stated.

AGA domestic research, utilization conference, in Cleveland, March 31 & April 1

The 1949 Domestic Research and Utilization Conference of the American Gas Association will be held at the Hotel Statler, Cleveland, Ohio, March 31 and April 1. It was stated that the Conference is specifically for engineers, servicing and other technical personnel of gas companies and gas appliance and equipment companies.

The program will include technical and non-technical illustrated papers on research and utilization covering central space heating, direct space

heating, air conditioning, appliance venting, burners and combustion, automatic pilot ignition, cooking, water heating, home humidity control, and kitchen ventilation.

The AGA Testing Laboratories, in Cleveland, will be open on Saturday, April 2, the day after the meeting, it was announced.

Pennsalt honors employees

Leonard T. Beale, president of Pennsylvania Salt Mfg. Co., is one of eight employees in the Philadelphia office and the Whitemarsh laboratory who were recently honored with pins denoting 20 years of service with the chemical firm. Besides Beale, 20-year pin recipients were A. E. Gaydos, Walker Penfield, A. E. Miller, E. C. Adams, T. Bayard Grace, Wm. Sagers, and Cooper Holmes.

Five employees who received honors for 15 years of service were H. G. Meyer, Geo. W. Benbury, Mary G. Kane, M. C. Hillwerth, and Sydney L. W. Lea.

Ten-year men honored were V. A. Curll, Arthur Bixby, A. H. Clem, R. G. Danehower, N. D. Peschko, and Dr. John F. Gall, supervisor of research. In addition, twenty-five other employees were honored for 5 years of service.

After receiving his own award from Y. F. Hardcastle, vice pres. in charge of mfg., who has been with Pennsalt for 40 years, Mr. Beale presented the service pins to the other recipients.

Plumbing-heating industry spokesman calls for "intelligent selling"

"Intelligent selling will be the order of the day in 1949," said E. J. Gossett, president, Plumbing and Heating Industries Bureau, at the 56th annual convention of the Illinois Master Plumbers Association, in East St. Louis, Ill., January 20.

Gossett, who is also president of Bell & Gossett Co., affirmed that "1949 will be a good year but with this significant difference as compared with previous years. We are all going to have to work a lot harder. There are unmistakable signs of a leveling off in demand. You will find, I believe, less of a disposition on the part of your customers to take things away from you."

Pemco names additions to service and control lab. staffs

J. B. Willis, service manager for Pemco Corporation, has announced that George Martin and Allen P. Wherry have joined the Pemco service department. Simultaneously, H. C. Craven, plant manager, announced that George G. Updike has been assigned to the company's control laboratory.

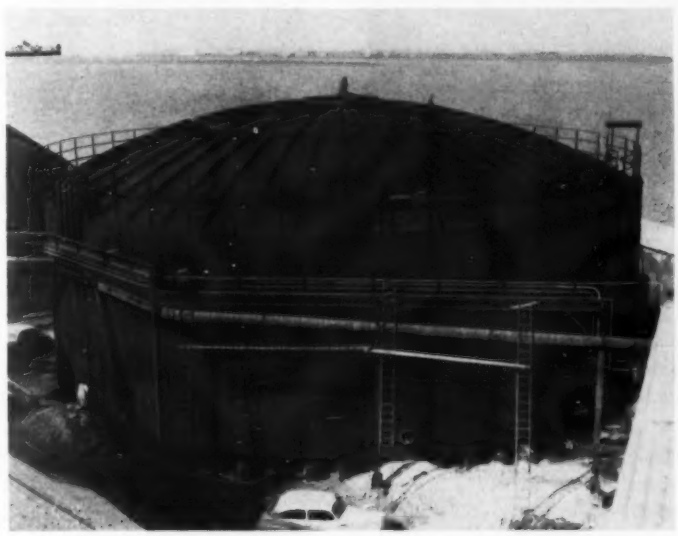
Martin, a member of the A.C.S. and Keramos, was graduated from North Carolina State College with a B.S. degree in ceramic engineering. Prior to joining Pemco, he was director of the Procurement Command, in Frankfurt, Germany. He will work out of Pemco's home office service department.

Wherry was appointed service engineer, and will work in the firm's southern territory. He is a graduate of the University of Illinois with a ceramic engineering degree. He was formerly with Alloy Engineering & Casting Corp., Champaign, Ill.

Updike, who has a masters degree in ceramic engineering from Ohio State University, was formerly associated with Porcelain Products Corp., Carey, Ohio.

Fourteen manufacturers are now producing various types of baseboard heating units, says the Plumbing and Heating Industries Bureau.

Rubber lined tanks for sulphuric acid



What are believed the largest tanks ever lined with rubber will be used in a New Jersey plant for the storage of weak sulphuric acid. The two tanks were lined by The B. F. Goodrich Company.

The tanks each hold 2,000,000 gallons and require 30 tons of rubber in the 3/16" linings. They are flat bottomed, 100 feet in diameter, with a dome top 45 feet high at its tallest and the main body of the tank 30 feet high. Size of one of the tanks can be visualized by comparing it with the automobile in the foreground of the picture.

Surface Combustion assignment

Gilbert J. Langenderfer has been assigned as district industrial engineer in the Indiana territory to represent Surface Combustion Corp. He spent the past eight years at the firm's Chicago office as an industrial engineer for the sale and service of heat treating and other industrial furnace equipment. Until permanent Indiana office arrangements are made. Langenderfer will operate out of the

Surface Combustion's Chicago office.

Bellaire Enamel appointment

Forest Benson, formerly national sales director for Norris Stamping & Mfg. Co., is now associated with The Bellaire Enamel Co., it has been reported. It was stated that "Benson's chief aims will be to improve the operation of the sales organization as pertains to distribution and customer relations."

Heads Wyandotte Milwaukee office

Frank E. Peterson has been named manager of the Milwaukee office of Wyandotte Chemicals Corp., according to an announcement by Carter B. Robinson, vice president—sales of Wyandotte's J. B. Ford Division.

Peterson joined the Wyandotte organization in 1937, and has been continuously attached to the Milwaukee territory. He was made assistant Milwaukee manager last year.

Philco announces large increase in refrigerator sales

Sales of Philco Corporation during 1948 reached a record total of about $270,000,000, it was announced by William Balderston, president, at the company's distributor convention at Palm Beach, Fla.

"This sales total represents an increase of $44,000,000 over the previous high level in Philco history, established in 1947," Balderston pointed out, "and is more than three times greater than our best prewar year. . . ." Balderston said that an important factor in Philco growth has been the rapid expansion of the firm's refrigeration division. Total sales of Philco refrigerators, home freezers and air conditioners increased 60 per cent over the previous year, it was stated.

Pittsburgh ACS section meeting

The January 14 meeting of the Pittsburgh ACS Section included a tour of St. Joseph Lead Co. of Penn., Josephtown, and a banquet at the Beaver Falls Hotel, with Wm. F. Wenning, of Ceramic Color & Chemical Mfg. Co., acting as toastmaster.

It was announced that presentation of this year's Bleininger Award will be made to Dr. Edwin W. Tillotson, assistant director of Mellon Institute, at the Section's next meeting, March 11, at Hotel Schenley, Pittsburgh. The first annual Albert Victor Bleininger Award for distinguished achievement in the field of ceramics was made just a year ago to the late Dr. Ross Purdy.

DuPont announces advancements in "color" department

The advancement of Joseph Shrawder, Jr. to the newly created position of assistant director of sales of the pigments department had been announced by the Du Pont Company. At the same time, Robert H. Pohl was advanced to Shwarder's former position of manager of technical sales; Jack B. Callaway was moved up to the sales promotion manager post; and Willard F. Spengeman was advanced to division head of the color sales service laboratory.

Dept. of Commerce issues handbook of hazards from explosive dusts

Explosions in industry are more frequently caused by dust than is realized, according to a comprehensive study of dust explosions released by the Office of Technical Services, Department of Commerce.

Entitled "Handbook of Industrial Hazards from Explosive Dusts" and written by W. H. Geck, the two-volume study is an analysis of the nature and composition of dust, its origin, and its ignition. It excepts only the flour, coal, and aluminum industries from its coverage.

The text of the study is in German, with an abstract, foreword and table of contents in English. Diagrams and tables accompany the text.

AGA home service workshop attendance from 31 states

Nearly 200 home service representatives from 31 states attended the American Gas Association Home Service Workshop, at Hotel Statler, Cleveland, January 24-27. About three-quarters of the conference was made up of representatives attending the Workshop for the first time, it was stated.

Erhard to head Anderson Stove sales

A new expansion program aimed to increase the distribution and sales of Anderson gas ranges was reported recently with the appointment of Herbert C. Erhard as sales manager of Anderson Stove Company, Anderson, Ind.

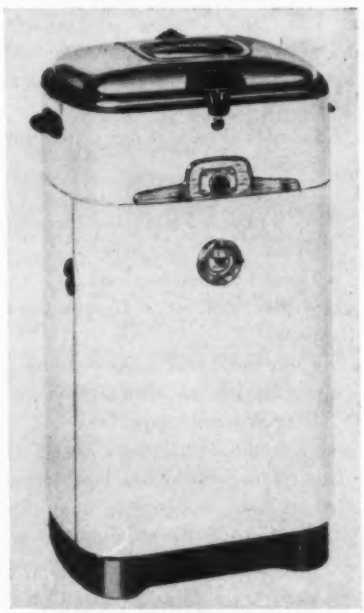
Erhard's new appointment was announced by J. T. Mascuch, president, Breeze Corporations, Inc., of which Anderson Stove is a subsidiary. "In acquiring the services of H. C. Erhard," Mascuch stated, "we have taken a major step in our expansion plans for Anderson Stove Company." Erhard has been in the gas appliance business for over 34 years, and was

recently associated with Standard Gas Equipment Corp. as vice president in charge of sales.

Trenton ACS new officers

At the January 21 meeting of the Trenton Section of the American Ceramic Society, new officers elected include the following: H. B. DuBois, counsellor; J. C. Elder, chairman; R. E. Tucker, vice president; and Bernhard F. Gentsch, secretary-treasurer.

New electric roaster



National Enameling and Stamping Co. has announced that it is now in production on an 18-quart "Golden Jubilee" model NESCO electric roaster. The announcement was made by T. E. Fajen, sales manager, Electrical Division, at a recent meeting of sales representatives at NESCO's Jacksonville (Ill.) plant.

Features of the new roaster include: a push button cover release; a new read-at-a-glance temperature guide dial, a see-thru glass window for checking cooking progress, and a new large finger plate for closing the cover.

Youngstown appointment

Vernon O. Droege has joined The Youngstown Sheet and Tube Com-

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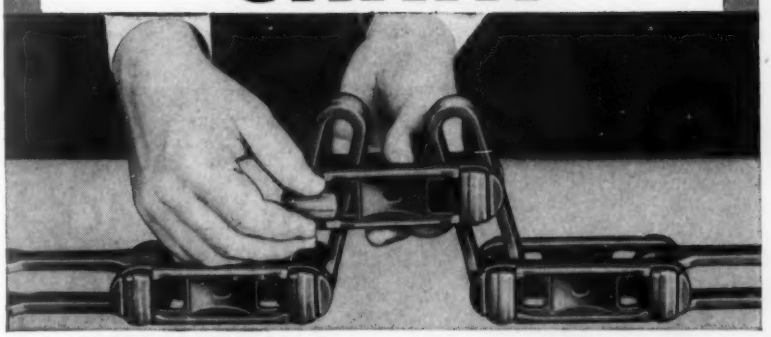
A *New* CONVEYOR CHAIN



WEBB X-458

- CANNOT TELESCOPE
- WILL NOT COME APART
- GREATER FLEXIBILITY ON VERTICAL BENDS
- INTERCHANGEABLE WITH REGULAR 4" CHAIN
- ULTIMATE STRENGTH 48,000 POUNDS

Patented X-458 Chain is another triumph in the Jervis B. Webb Company 3-decade history of pioneering in the development of better conveyors.

Thoroughly tested in service, it has proven ideal for overhead, floor type or drag line conveyors.

X-458 Chain cannot telescope or disassemble in service; eliminating that source of damage to conveyor drives. Individual links are stiffer and stronger, yet this chain provides more flexibility in vertical bends.

Drop forged from high carbon steel of 85,000 to 95,000 psi tensile strength, this chain has an ultimate strength of 48,000 pounds. It has exceptional ability to withstand shock loads and is unusually resistant to corrosive and abrasive action.

5261

Let us show you what it will do for you.

WEBB

J. B. WEBB CO.

CONVEYOR ENGINEERS AND MANUFACTURERS

8951 ALPINE AVE. • DETROIT 4, MICH.

Offices in Principal Cities

→ *from Page 51*

pany as division engineer in the industrial engineering department, according to a report. Following his graduation from Purdue University, he held positions of industrial engineer at the Carnegie-Illinois Sheet and Tin Mill, at Gary; assistant plant industrial engineer for Continental Foundry & Machine Co., East Chicago; and consulting engineer with Albert Ramond & Associations, Inc., Chicago.

Perfect salesman found

Found at last is the man who answers the definition of an ideal salesman. He sells refrigerators to Eskimos! The name of this paragon is Les Nerland, a dealer at Fairbanks, Alaska, who handles Philco refrigerators and recently added several Eskimo housewives to his list of customers.

He is reported to have sold a refrigerator when the mercury registered 43 degrees below zero. As promised, he made delivery the same day even though the truck delivering the unit froze up on the way to his customer's house! Now we've heard everything!!

Zelinski represents NEMA on Industry Coordinating Committee and "safe transit" program

The National Electrical Manufacturers Association, of which Leo K. Fox is recovering secretary of the appliance sections, has announced the appointment of Edward Zelinski as NEMA representative on the Industry Coordinating Committee of the PEI "Safe Transit" program.

The complete personnel and section affiliation of this Joint Sections Committee is as follows:

Edward Zelinski, Chairman, Hotpoint, Inc.
(electric range section)

E. B. Frazier, Frigidaire Division, General Motors Corporation,
(electric range section)

H. J. Benzie, General Electric Company
(household sink units section)

L. H. Darbyshire, Norge Division, Borg-Warner Corp.
(household refrigeration section)

Chairman Zelinski has been designated as sole representative on the Industry Coordinating Committee.

Leadership studies prepared for supervisory personnel

"Not just bossing men, or merely parroting management, but understanding and working with both" is the goal of a new five-lesson "Leadership" course prepared for supervisory employees in industry by International Correspondence Schools, according to John C. Villaume, dean of the ICS School of Business.

Titles of the five lesson units indicate their scope: "Leadership and Free Enterprise; Leadership and Output; Leadership and the Workers; Leadership and Organized Labor; Leadership and the Organization." They are included as a regular part of all ICS management courses, and are being used in themselves by management in training foremen groups, said Mr. Villaume.

A compactly built instrument (1⅝" x 2¾" switch case). Power element consists of a stainless steel diaphragm with capillary tube and bulb filled with a liquid with high co-efficient of expansion. Action is sensitive and powerful. No resilient parts are interposed between power elements and contacts. Therefore, positive break is obtained when power element expands. Standard temperature range 150° to 550°. Can be obtained in "direct" and "reverse" action models in eight temperature ranges to meet appliance needs.

Write for bulletins and complete information.

IN HOME AND INDUSTRY ***EVERYTHING'S UNDER CONTROL***

Robertshaw Fulton

CONTROLS COMPANY . YOUNGWOOD, PENNSYLVANIA

FULTON SYLPHON DIVISION
Knoxville, Tennessee

BRIDGEPORT THERMOSTAT DIVISION
Bridgeport, Connecticut

GRAYSON CONTROLS DIVISION
Lynwood, California

AMERICAN THERMOMETER DIVISION
St. Louis, Missouri

Central enamelers meeting in Erie, Pa., April 1

The Central District Enamelers Club next meeting will be at the General Electric Co. plant in Erie, Pa., Friday evening, April 1. After a 6 p.m. dinner, W. B. Hill, manager of manufacturing for G.E.'s Household Refrigerator Division, will discuss their operations, and A. J. Redpath, engineer on refrigerator cabinets, will talk on quality control. The meeting will be concluded with a tour of the Refrigerator Cabinet Division.

Pemco man appointed to Baltimore trade forum

Albert Kellner, export manager for Pemco Corporation, has been appointed to the board of directors of the Baltimore Foreign Trade Forum, according to an announcement. Kellner has directed the export activities of Pemco for 24 years.

Report released on analysis of suggestion plans

Executives who are considering initiating an employee suggestion plan, or who would like to improve an existing plan, will find use in the report "Suggestion Plans for Employees."

This report, designed to furnish executives of Metropolitan Group-insured companies with information on current suggestion plan policies and practices, is a composite analysis of the plans of 45 companies in both manufacturing and non-manufacturing fields.

Executives may obtain copies of the report by writing on their business stationery to Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y.

New products for 1949 compiled into booklet

More than a thousand new products and services now ready for marketing have been compiled into an 80-page 1949 "New Products" booklet by The N. Y. Journal of Commerce. Gathered from a nationwide survey of manufacturers, the new compilation offers a detailed description of the innovations of more than 750 different manufacturers, classified by industry and indexed by name and address of each producer.

Calgon appointment

Calgon, Inc., Pittsburgh, manufacturers of chemicals, used in domestic, industrial and municipal water treatment, has announced the appointment of Dr. Thomas H. Dougherty as assistant director of research.

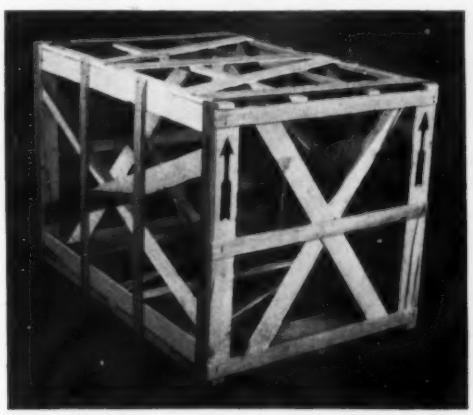
Robertshaw-Fulton advances Sidwell

Hal Singleton, sales manager of Grayson Controls Division of Robertshaw-Fulton Controls Co., Lynwood, Calif., has announced the addition of

to Page 63 →

ATTENTION!
PACKAGE ENGINEERS

The Bigelow-Garvey Company has pioneered in the design and manufacture of crates for shipping porcelain enameled appliances such as stoves, washing machines, ironers, freezers, sinks, bath tubs and similar products for more than twenty-five years.



A typical Bigelow-Garvey Tight Corner Hinged Crate designed for shipping a porcelain enameled range.

Our Tight Corner Hinged Crate is very popular for appliances due to its unusual rigidity, strength and ease of assembly. Made of hardwood throughout, the cleats are pre-drilled with nail holes wherever the craters have to drive nails. The four sides are hinged together so that it can be collapsed and shipped flat, then assembled very quickly.

For complete coverage of the product we recommend our Kraft Crate which is made of corrugated fibre board reinforced with wood cleats and is also collapsible.

BOX SHOOKS PALLETS BULKHEADS

Write us regarding your shipping problems.

BIGELOW-GARVEY LUMBER CO.

General Office and Laboratory

320 West Huron Street • Chicago 10, Ill.

Mills • Arkansas • Georgia • Wisconsin • Minnesota • Washington

New Supplies and Equipment

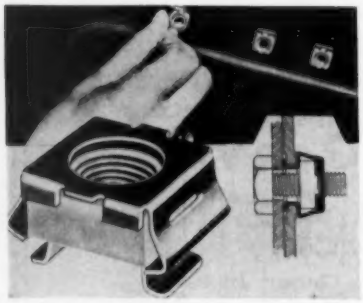
C-21. Horizontal multiple punch

A new machine, designed by Beatty Machine & Mfg. Co. for multiple punching of flanges of long wide sheets, allows for punch tools to be mounted on varying centers across the ram face. The machine is fitted with an air clamp device which holds the material down during the punching operation for gauging purposes. Stripping is accomplished by air cylinders which travel with the ram.

C-22. Industrial paper tape

A new paper tape is reported to have a tensile strength of 180 pounds per inch of width. According to the manufacturer, Minnesota Mining & Mfg. Co., the tape has a pressure-sensitive adhesive which grips immediately upon contact. The new tape is expected to be adaptable for use in the shipping of stoves, metal cabinets and other household equipment, as well as window frames, doors, trim, raw lumber, wall board, panels, and plywood sheets.

C-23. New "Speed" fastener



A new "Speed Grip Nut Retainer," claimed to offer worthwhile assembly savings by eliminating welding, clinching or staking, has been announced by Tinnerman Products, Inc. The "Retainers" are said to be easily and quickly snapped into place by hand or with a screw driver and their spring steel "mechanical hands" hold the nut in bolt-receiving position. Pre-assembled, the unit is ready to be snapped in place on the assembly line.

More Information

For more information on new supplies and equipment reviewed here, fill out the order form on page 58.

C-24. Light-weight hoods

A new fabric dust hood, supported by a head frame, covers and protects the face, head and neck down to the shoulders, and weighs only five ounces. Visibility is provided through a large clear plastic window. The loose-fitting hoods are manufactured by General Scientific Equipment Co.

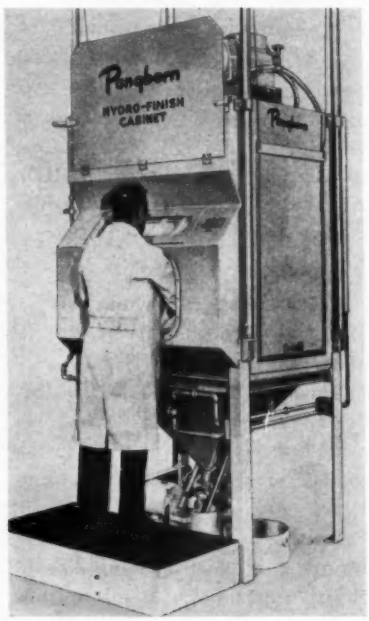
C-25. Plant ventilation systems

Two large Dravo "Counterflo" direct-fired air heaters, installed at the new assembly plant of Homestead Valve Mfg. Co., are said to bring in and warm approximately 44,000 cu. ft. of fresh air per minute. Thus an atmosphere with a uniform temperature of 70° F. is maintained in the working area despite removal of large volumes of air laden with fumes from spray finishing systems and other plant operations.

C-26. Electric laboratory and shop furnace

A completely equipped, compact, single-unit electric laboratory and shop furnace has been placed on the market by Pereny Equipment Co. The furnace offers a heat cycle ranging from room temperatures up to 2500° F. within two hours, for continuous operation, with "flash" firing up to 3000° F. It is fully automatic, electronically operated, with indicating and controlling pyrometer.

C-27. New blast cleaning method

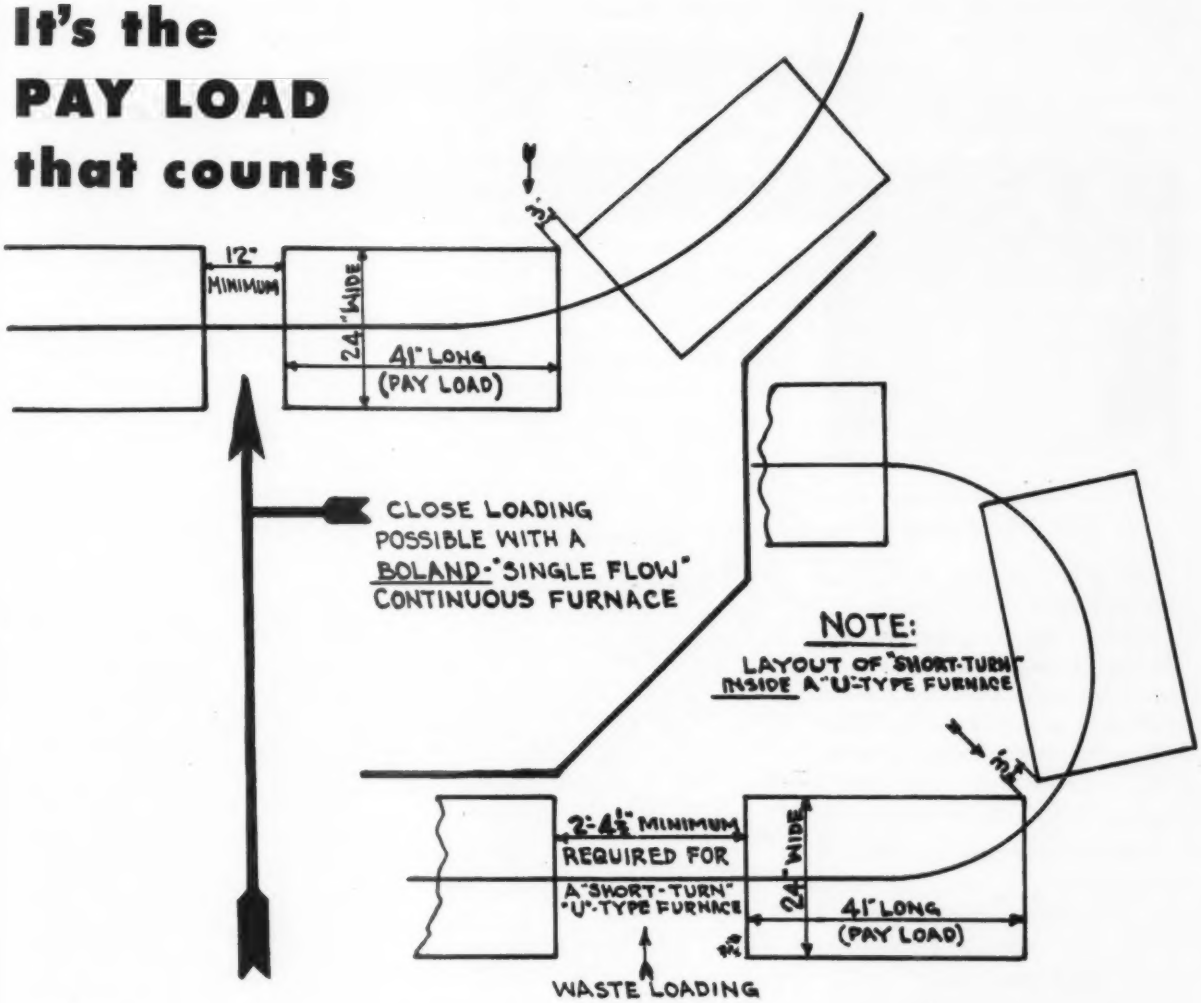


A modified form of impact blasting with an abrasive suspended in liquid is available from Pangborn Corporation. The development is said to differ from existing blast cleaning equipment in that extremely fine mesh abrasives can be used, making possible the blast cleaning of precision machined parts and holding within tolerances as close as .0001 of an inch.

C-28. Water demineralizers

With the establishment of an ion exchange department, Industrial Filter & Pump Mfg. Co. is introducing a line of water demineralizers which are said to deliver the chemical

It's the PAY LOAD that counts


12" MINIMUM
24" WIDE
41" LONG (PAY LOAD)
CLOSE LOADING POSSIBLE WITH A BOLAND-"SINGLE FLOW" CONTINUOUS FURNACE
NOTE:
LAYOUT OF "SHORT-TURN" INSIDE A "U"-TYPE FURNACE
2'-4½" MINIMUM REQUIRED FOR A "SHORT-TURN" "U"-TYPE FURNACE
24" WIDE
41" LONG (PAY LOAD)
WASTE LOADING

In the final analysis it's the PAYLOAD that counts in considering any porcelain enameling furnace. That's one big reason for the popularity of Boland "SINGLE FLOW" Continuous Furnaces — they produce a bigger pay load of finished parts.

The drawing shows how the wide radius turns *outside* the Boland furnace makes closer loading possible. No conveyor space is lost to accommodate short radius turns *inside* the furnace.

For "one piece" bodies for stoves, refrigerators and other appliances, or any large parts, the advantage of the wide radius turns is apparent.

BUY THE FURNACE WITH THE GREATEST PAYLOAD —BUY BOLAND

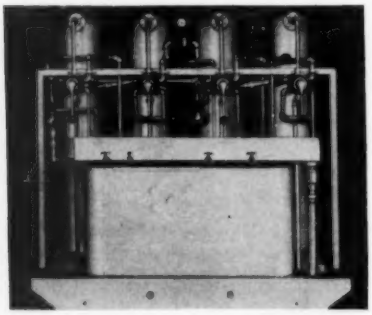
Boland builds many types of furnaces, but the "SINGLE FLOW" continuous with the patented "FLOATING ROOF" fits the bill best for most high production plants. Let us give you complete information and quotations on your next installation.

ALBERT J. BOLAND COMPANY

407 NORTH EIGHTH BUILDING • ST. LOUIS 1, MO.

Designers and Builders of Continuous and Box Type Enameling Furnaces

equivalent of distilled water at only a fraction of the cost of distilled water. No heat or stills are required. The dissolved mineral salts in the water are removed by a simple chem-



ical action and absorption in passing the water through beds of ion-exchange resins.

This demineralization of water is recommended for such industries as enameling, ceramics, electroplating, pharmaceuticals, photographic processing, laboratory work, and for any product or process requiring water that is free from dissolved mineral salts.

C-29. "Junior" size humidifier

A new humidifier, designed by Walton Laboratories, Inc. to fulfill the need for a humidifier for medium sized areas, requires no steam, no pumps, no compressors, and no return lines. The "Junior Walton" humidifier is noiseless in operation, and the vapor is emitted looking like a fog, finer than cigarette smoke.

C-30. Portable hardness tester

A new portable hardness tester for Rockwell readings has been announced by Riehle Testing Machines. The instrument weighs only 3 lbs. 6 oz. and is available in a carrying case. The tester is said to be comparable in accuracy to bench type testers.

C-31. Protective coating for products in storage

A new transparent plastic protective coating that will adhere to practically any product is claimed to have high resistance to discoloration at high temperatures, water, alcohol, alkali, acid, mineral oils, grease, and chemical fumes. According to the manufacturer, Foster & Kester Co., Inc., newly machined parts sprayed with the "Krylon" coating will remain like that through an indefinite storage period. It was stated that the coating may be removed at any time by a solvent developed by the same manufacturer.

C-32. Combination blast gun

A combination blast gun, manufactured by Engineered Products, Inc., can be connected to any air line and is equipped for sand blast operations or spraying solvents and liquids. The nozzle is changed by loosening a retaining nut and slipping another nozzle in place. The gun is designed to remove paint, rust, scale and oxidation disintegrate.

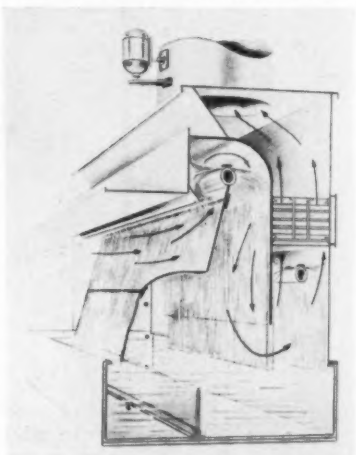
C-33. Electric furnace with accurate temperature control

A new floor model electric furnace, manufactured by K. H. Huppert Co., was designed specifically for tool and die work, hardening and drawing (and in the chemical laboratory for ash analysis). The new furnace is said to afford to other applications accurate heat control over the entire range from room temperature up to and including 2000° F.

C-34. Explosion-proof automatic floor cleaning machine

An explosion-proof floor machine for automatic scrubbing, cleaning and polishing of hazardous areas has been put into volume production by Multi-Clean Products, Inc. It was stated that the new machine was designed specifically for floor maintenance in plants where a spark might set off an explosion of fumes or dust. All equipment and components used in the manufacture of this floor cleaning machine have been listed by Underwriters Laboratories for use in hazardous areas.

C-35. Water wash spray booth



In a new "Dynaprecipitator" water wash spray booth, overspray and fumes are whisked off through a solid unbroken curtain of water and treated to five successive thorough scrubbings, according to the manufacturer, Binks Manufacturing Co. The process removes and collects all spray solids and pigment for disposal or reclamation. Because of the thorough washing of the fumes and their dilution with large volumes of air, atmosphere pollution is said to be reduced to a minimum.

C-36. Cold finished carbon steel bars for commercial use

Commercial use of "Electreat" cold finished carbon steel bars to replace

GETTING THE "BENDS"...

... from the BLENDS?

Our artist drew a diver . . . to help put this point across.

Diving—and then being properly decompressed on emerging—is a mighty ticklish business. Full of hazards!

There are plenty of "hazards" — and "pains", too — when an enameling shop tries to mix its own colors and strive for a perfect match.

THAT'S a job for specialists—O. Hommel Company, the leading example.

Here's why it will pay you to buy ready-mixed colors from Hommel:

(1) Speed up production;
(2) Avoid expensive experiments;
(3) Get the right match every time, on time;
(4) Keep up with your competitors.

Don't waste valuable production time and money "rolling your own".

Order matched colors from Hommel, world's largest supplier.

Laboratory Controlled Production of Ceramic Supplies

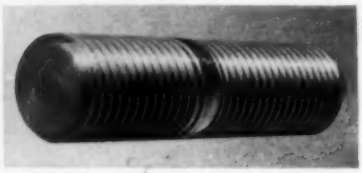
THE O. HOMMEL CO.
PITTSBURGH 30, PA.
Pacific Coast Agents
L. H. BUTCHER CC

- FRIT for Steel, Cast Iron or Pottery
- CERAMIC COLORS
- CHEMICALS
- BRONZE POWDERS
- METAL POWDERS
- SUPPLIES
- EQUIPMENT

Our Technical Staff and Samples are available to you without obligation. Let us help you with your problems.

World's Most Complete Ceramic Supplier

higher cost alloy steels is reported by Jones & Laughlin Steel Corp. It was stated that Lundberg Screw Products Company is using the bars, where specifications permit, to replace more expensive chrome-molyb-



denum alloy steel and chrome-nickel-molybdenum alloy steel in the manufacture of certain studs for automotive and farm machinery. Electreat has reportedly enabled Lundberg to eliminate heat treating of these studs after they are machined. Photo shows a finished stud.

C-37. Portable filter for chemical solutions

A new compact portable filter is self-cleaning, and requires no parts such as bags, sheets or pads. Titeflex, Inc. developed the small unit for the filtration of any chemical solution. It is 17 inches long, 8 inches wide, 26 inches high, and weighs approximately 70 pounds. It can be carried from tank to tank for batch work, or can filter continuously on a specific tank.

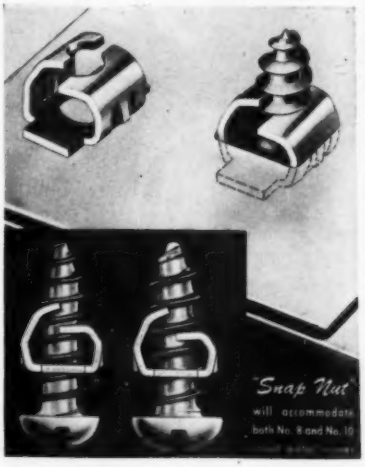
C-38. Abrasion testing set

A new abrasion testing set, made by Taber Instrument Corp., incorporates their rotary abrading action on a 4″ specimen. The wear results from alternately rubbing the flat faces of two resilient Calibrase wheels over the surface being tested. A range of standardized abrasive wheels are available for testing all types of surface finishes, including porcelain enamel, electroplate, organic coatings, glass and plastics. A feature of the new testing set is that the control unit is equipped for dual operation.

C-39. Calculator for engineers and plant men

Engineers, maintenance men and others who are called upon to calculate final pipe diameters, air volumes, static loss and other air flow figures can save time and get the right answers quickly with a "Norblo Air Flow Calculator." The calculator is of the monogram type, arranged circularly and using both sides for calculations. The diameter is 6 inches. Scales are large, clear and easy to read. A small portion of the calculator can be used to figure out the size of dust collectors (centrifugal, automatic or standard bag types). The calculator is made by The Northern Blower Company.

C-40. New "Snap" fastener for blind location



A new spring steel "Snap Nut" is for anchoring nut-to-panel for blind attachments. No welding, clinching or special tools are necessary. The nut, a product of Prestole Corporation, is attached directly from the work surface, instead of reverse side of panel. It snaps into a 9/32″ square hole in panels .037″ to .055″ thick, and is designed for entrance of screw, even in cases of misalignment of panels. The new fastener will accommodate both No. 8 and No. 10 sheet metal screws.

C-41. Hand-operated degreaser

A new two-dip hand-operated degreaser has been designed for rapid, safe and thorough cleaning of medium-size metal parts of all kinds in machine shops, production, assembly, and maintenance departments, according to the manufacturers, the Detrex Corporation.

The "625" degreaser is said to remove grease, oil and similar materials many times faster than other methods, and leaves all surfaces thoroughly clean and dry. To operate, the parts are lowered into boiling solvent, transferred within the machine to a cool solvent rinse compartment, and after a few seconds, are removed through a solvent vapor zone. Production capacity is rated at 1000 lbs. of steel parts per hour.

FINISH
360 N. Michigan Ave.
Chicago 1, Illinois

Please forward to me at once information on the new supplies and equipment and new industrial literature as enumerated below:

No._____ **No.**_____ **No.**_____ **No.**_____

No._____ **No.**_____ **No.**_____ **No.**_____

Name _____ **Title** _____

Company _____

Company Address _____

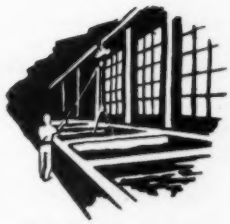
City _____ **Zone**____ **State** _____

...FOR AMERICAN STOVE CO.
Harvey, Illinois

Consult Fahralloy
for
Lightweight Burning Tools

THE FAHRALLOY COMPANY
150th & Lexington Ave., Harvey, Ill.

Something New in Hot Sulphuric Pickling!



When you use Oakite Pickle Control No. 3 for hot sulphuric solutions, you get these five major advantages:

1. **Stable solution, even at high temperature**
2. **Reduced hydrogen, less fuming**
3. **Complete rinsing, less smut**
4. **Longer solution life**
5. **Saving in pickling time, acid, money**

Details yours FREE in "Improved Pickling and Neutralizing with Oakite Materials." Get your helpful copy of this Oakite Service Report by writing to Oakite Products, Inc., 17 Thames Street, New York 6, New York.

OAKITE
REG. U. S. PAT. OFF.
INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

Technical Service Representatives Located in Principal Cities of United States and Canada

Norge Ski Jump champion wins Norge refrigerator

Petter Hugsted, from Kongsberg, Norway, winner of Class A honors in the Norge Ski Club's annual international meet at Fox River Grove, Ill., January 16, received as first prize a Norge refrigerator. The Olympic ski champion immediately made plans to ship his prize to his home in Norway.

With the Customer

Immediate Action Counts

At Lawndale your orders are handled immediately upon receipt. And our around-the-clock jobbing service does not allow the production schedule on your products to be disrupted by a lack of porcelain enameled components.

For quality porcelain enameled products, contact Lawndale Enameling on your next job. We guarantee maximum service to manufacturers with busy assembly lines.

Lawndale Enameling Company
1137-1139 West 14th Street
Chicago 8, Illinois

•

Telephone CHesapeake 3-5495

New industrial literature

3-301. 'Hatching Ideas into Dies"

A 16-page booklet, "Hatching Ideas into Dies," published by Mardigian Corporation, highlights die production methods, facilities and service. It was stated that a typical economy obtained with the use of Mardigian dies is that all restriking operations are eliminated on bathtub production.

3-302. Edition of tap catalog

A new 111-page pocket-sized catalog and handbook, published by Charles H. Besly and Co. for industrial users of taps, contains sections on (1) classification of fits, (2) tap drill sizes, (3) cutting speeds and lubricants, and (4) screw thread terms and definitions.

3-303. Rubber processing for industrial equipment

Information on rubber processing for industrial equipment and production parts is contained in a new catalog released by Automotive Rubber Co., Inc. Included is data pertaining to equipment fabricated for pickling operations used in porcelain enameling.

3-304. Industrial precision lighting

The advantages of precision lighting, or localized lighting, in industrial plants, is contained in Catalog 65B of Adjustable Fixture Company. Among the advantages listed are ideal illumination for each individual job, temporarily idle areas or machines are not needlessly lighted, and each operator can direct the light to the exact spot desired.

3-305. Hard facing alloys for dies

A new four-page booklet, published by Wall Colmonoy Corporation, describes the hard facing of forming and drawing dies. Life of dies can be increased from 5 to 30 times by hard facing them, according to data presented in the booklet.

More Information

For more information on new industrial literature reviewed here, fill out the order form on page 58.

3-306. Use of axial blowers

The industrial and commercial uses of axial blowers, manufactured by International Engineering, Inc., are discussed in Bulletin 104. Among the uses listed are removal of fumes and dust, mechanical draft for boilers, heating, and drying. It was stated that due to placement of guide vanes, air flow is remarkably free of pulsations.

3-307. Pneumatic conveying systems

Pneumatic conveying systems for the ceramic, chemical, steel and allied industries are discussed in Convair Corporation's new Bulletin 102. A pneumatic conveying system, designed especially for a batch plant for the ceramic industry, is outlined in detail in the bulletin.

3-308. Booklet on Lustron

A new booklet of The Patterson Foundry & Machine Co. describes facilities and equipment installed at Lustron Corporation. The booklet contains full-color photographs of the interior and exterior of the Lustron all-porcelain enameled steel home.

3-309. Magnetic concave rolls

A new bulletin contains data on high intensity electromagnetic concave rolls for high speed handling of steel and iron pipe, rod, sections and angles. It was stated that one application of the magnetic concave rolls, made by Dings Magnetic Separator Co., is to hold pipes from turning in spray finishing systems.

3-310. Grinding & mixing machinery

The various grinding and mixing machinery, including ball and pebble mills, horizontal and vertical mills, manufactured by Paul O. Abbe, Inc., are described in the new Catalog V.

3-311. Dillon tester bulletin

A new four-page bulletin of W. C. Dillon & Co., Inc. contains information of use to testers of many types of material used in industrial production. In the bulletin is illustrated a portable Model "L" Universal Tester—a precision instrument of seven different ranges for use in industrial plants, universities and laboratories for testing materials of tensile strength from a few pounds up to 160,000 pounds psi.

3-312. "How Steel is Made"

The story of modern steelmaking, from the mines to finished steel, is informally told in a new 64-page booklet, "How Steel is Made," just issued by Inland Steel Company.

Liberally illustrated with sketches,

What industrial trade publication answers this description?

Circulation — completely blankets the multi-billion dollar major appliance and allied metal products market. (Individual copies to key men from top management, through purchasing and engineering, to key plant men.)

Editorial — has averaged over fifty per cent editorial material, compared with advertising, since its inception in 1944. Majority of feature articles are prepared and *signed* by the metal products manufacturing industry's top technical men and practical plant operators.

Business growth — dollar receipts from advertising increased over fifty per cent last year (1948 sales over 1947 sales). (Compares with reports for comparable industrial publications showing fractions of one per cent gain.) Watch future issues for the advertising of *old friends*, plus a fine list of *new advertisers* for 1949.

Dana Chase PUBLICATIONS

360 NORTH MICHIGAN AVENUE • CHICAGO 1 • ILLINOIS

TELEPHONE CEntral 6-1229

finish

diagrams, and photographs, the booklet was planned primarily for the layman—executives who buy and use steel, workers who fabricate steel, engineering students, and other to whom steelmaking is of interest.

3-313. Electro-galvanized products

Of interest to those manufacturing steel products that require painting, lacquering, or synthetic enameling, is a new book on electro-galvanized products recently issued by Republic Steel Corporation.

The new book contains pertinent information of welding, soldering, cleaning, painting and fabrication of electro zincplated sheets, and tells how the use of these products can save the manufacturer time and money, and pictures numerous current applications.

3-314. Drilling machines catalog

Two new drilling machines, made by Sibley Machine & Foundry Corp., are illustrated and described in Catalog 68. Features included are an "inching" button which provides ease in changing speeds, and a 4-speed geared transmission lever.

3-315. Folder on continuous spray pickling machine

A six-page folder which describes in detail the construction, operation and advantages of its spray pickling and washing machine which prepares formed-metal products for enameling, painting or plating has been published by The B. F. Goodrich Company. Among features of the folder are a cut-away illustration of the machine, with descriptions of the most important parts and the roles they play. A table listing the solutions used in each of the ten sections, automatic cycle time and immersion cycle time is included.

3-316. Cleaning compound data for steel and aluminum

Complete data is available on two new alkaline metal cleaning compounds. One is a metal cleaner designed for removing light shop soils and for use in industrial washers when cleaning aluminum. It is claimed that it will not pit, corrode or discolor aluminum when used in a spray washer. The other cleaner is a heavy-duty metal cleaner designed to remove tenacious soils such as drawing compounds from steel parts. It is said to be the first completely solventized detergent for use on ferrous metals. The data is available from The DuBois Company.

3-317. Combination proportioning oil and gas burners

Data on "combination proportioning oil and gas burners" for precision control of temperature and atmosphere in all heating applications is contained in Catalog 408 issued by Hauck Manufacturing Co. The new catalog contains data on automatic control, burner accessories, burner capacities, dimensions of combination burners, and refractory ignition tiles.

We Specialize in...

- SIGNS
- NAME PLATES
- JOB FINISHING

Write today for our price list or let us quote on your requirements.

If you use signs, neon faces, name plates, or have job enameling requirements for sheet steel parts, we can give you expert workmanship, attractive prices and prompt service. We specialize in this type of work.

Screen Process or Stencil Decoration

PORCELAIN ENAMEL FINISHERS

3223 W. 30th St., Chicago 23, Illinois, Phone: Bishop 7-3221

It's **MISCO** *for* HEAT RESISTING **ALLOYS IN ROLLED MILL FORMS**

Sheets — Plates — Rounds ● Squares ■ Hexagons ● Flats — Angles L
Channels U Sections Pipe ○ Nuts ○ Welding Rod

If You Use or Need HEAT RESISTING ALLOYS *Send For Our* MONTHLY STOCK LIST

We Have Over 200 Items of Heat Resisting Alloy Mill Forms in Warehouse Stocks Ready for You

WE SPECIALIZE IN A.I.S.I. TYPES 330, 310, 309, 430

ROLLED PRODUCTS DIVISION
Michigan Steel Casting Company
1999 GUOIN ST. • DETROIT 7, MICH.

MISCO
One of the World's Pioneer Producers and Distributors of Heat and Corrosion Resisting Alloys

From Editor's mail

→ *from Page 37*

can continue to aid in the advancement of the industry if thru your printed columns you bring the idea that inspection is an important function to the people who are concerned.

Donald B. Wilson
Chicago, Illinois

A constructive suggestion—we will work on it.

good job of reporting

Dear Sir:

I think the presentation of the Packaging and Shipping program in the January issue of FINISH is the finest piece of reporting on such a project that I have ever seen. The thoroughness with which it is covered, the clear manner in which the objectives are brought out and the general discussion of the importance of this project have been done in a masterly manner.

I was talking to Mr. Yingling of American Trucking Assns. and asked him if he had read it. He replied that he also felt it was one of the finest jobs of this type that he had ever seen.

Edward Mackasek
Managing Director
Porcelain Enamel Institute
Washington, D. C.

NEWS

→ *from Page 53*

L. A. Sidwell to the sales department. Sidwell previously was assistant production manager of the Grayson Division. His new duties will evolve around the coordinating of customers' orders with factory scheduling.

Lee Honeywell, formerly with Round Oak Corp., is now superintendent of the enameling plant at Geuder Paeschke & Frey Co., Milwaukee, and R. G. Swigart is now general plant superintendent, it has been reported.

It is reported that Walter E. Pack, formerly in the engineering department at Enamel Products Co., Cleveland, Ohio, has been appointed purchasing agent, replacing A. W. Brandt.

Metalwash opens new office in Detroit

Metalwash Machinery Corp. has announced the opening of its new Michigan office at 6432 Cass Avenue, Detroit, with Webb L. Nimick in charge. Nimick previously was with Metalwash's main office in Irvington, N.J., where he worked on the development and design of washing, pickling, drying, and processing equipment for metal parts.

"Ingersoll News"

The first issue of *Ingersoll News*, new monthly publication of the Ingersoll Steel Division of Borg-Warner Corporation, was published in Jan-

to Page 68 →

THE R-S TWO-WAY RIDE RECORDER

Weight: 17½ pounds
Case Dimensions: 8" x 8" x 15"

An Important Unit in the "Safe Transit" Program

THE R-S Two-Way Ride Recorder meets all of the specifications adopted by the Porcelain Enamel Institute in their standard test procedure. Same sturdy design that has been used so successfully during the past twenty-eight years by both railroads and shippers. A simple and reliable instrument.

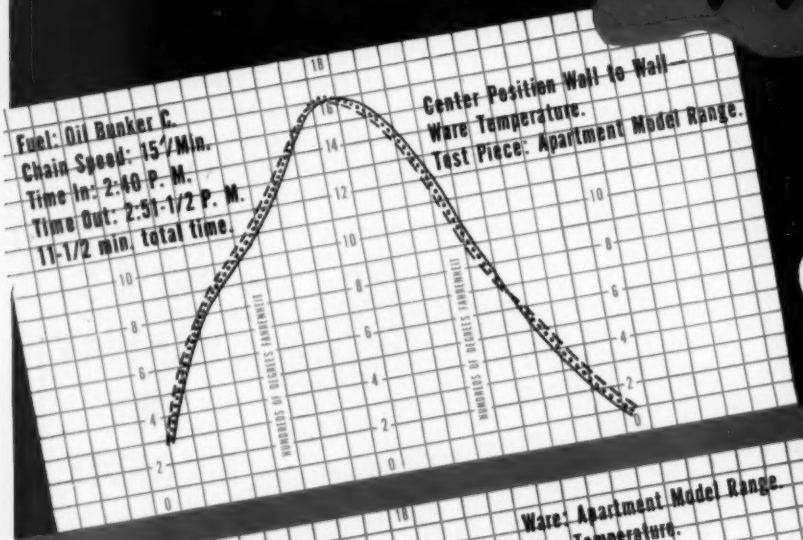
The amount of savings realized by many manufacturers who have used this recorder in accordance with the PEI testing procedure are enormous. One manufacturer has reduced losses from 28% to less than 1% because of the adoption of this "pre-transportation" testing. Another manufacturer making 80,000 units per year reports a saving of over $1 per unit because of saving in more effective, but cheaper and simpler, design of merchandise and crating.

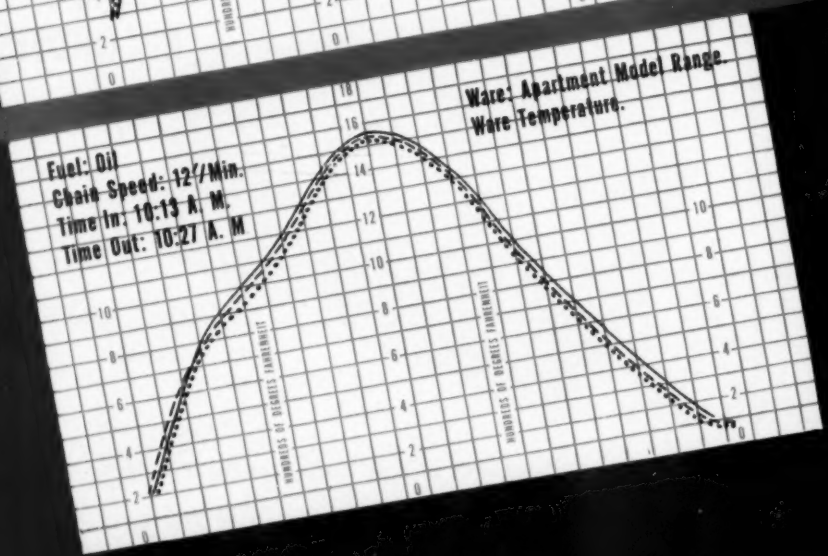
Participate in the "Safe Transit" program as many others are doing. Write for more information on how YOU can save money and protect your products in transit.

THE IMPACT REGISTER CO.
CHAMPAIGN, ILLINOIS

HERE'S THE PROOF!

Center Wall





Top left: Curve shows even horizontal heat distribution on both sides and center of the ware.

Bottom left: Curve shows vertical temperature gradients recorded simultaneously at top, center and bottom of the ware.

Examine the curves above. Note how closely the temperature gradients (both vertical and horizontal) parallel each other. At no place on the ware does the temperature vary more than 20 degrees from the time the ware enters and leaves the "hot zone". That's the kind of heat distribution we've all been looking for!

Such uniform heat distribution is possible because Ferro Continuous U-type Furnaces, with Center Wall Muffle, have more than 40% additional radiation area. This results in balanced heat distribution at all points on the ware . . . exceptional heating efficiency (through increased utilization of combustion) . . . plus lower operating costs and extended refractory life.

If you are considering a new furnace or want to improve the efficiency of your present installation—have Ferro engineers tell you more about this new, tested and proved Center Wall Muffle furnace construction. Write today for details.

Muffle Provides More Uniform HEAT DISTRIBUTION !

Installation scene showing Center Wall Muffle during construction.

FERRO ENAMEL CORPORATION

4150 EAST 56th STREET CLEVELAND 5, OHIO

NESA holds third annual meeting

(Continued from Page 33)

appearance of point-of-sale signs is far more important to most businesses than night-time appearance. Studies show in some instances that daytime traffic is represented by 75% of the total from 6:00 a.m. to 6:00 p.m. Beyond this time, bright lights feed the vanity but don't bring in the cash—unless you are referring to night clubs or businesses of this nature.

Ed Ferguson, Socony-Vacuum Oil Company, New York, told the porcelain enamel sign men, "Promotion work of plastic manufacturers and fabricators" has stirred up interest in new types of plastics among other producers — the rubber companies, for instance. "You folks in the porcelain enamel industry should pay more attention to these developments."

D. H. Malcom, of Armco Steel Corp., talked on the steel situation as it related to signs. One point he made was that a great deal of "conversion" steel, most of it made on obsolete equipment, will be eliminated from the market before a "normal" condition exists. The steel people, he said, are trying to discourage the building of big inventories. "Everything else being equal," said Malcom, "we think we will be over the hump in the first quarter of '49, but steel won't be available 'just anywhere' at mill prices this year."

Market development program discussed

As representative on the PEI Market Development Committee, Malcom also headed the discussion of the development programs for signs during the coming year. He pointed to three different types of markets and, as an example, used 100 specific products for his illustration. Twenty of these, he said, may be porcelain enamel. Twenty more may be readily suitable to plastics. Sixty, however, may be in the category that *could* be made of either. It's this group of 60 products, he said, for which the porcelain enamel sign men must shoot.

He classified sign buyers into separate groups: (1) the group that *knows* signs, and (2) the group of buyers that *does not* have complete information on signs and the characteristics of the materials used. Unfortunately for porcelain enamel, the latter group is the larger one.

Competition

Many of the strong points and weaknesses of competitive materials were discussed. Plastics were shown predominantly at the sign show, and therefore came in for their share of discussion. They have their strong points of translucence and excellent appearance. Some of the disadvantages have to do with die costs, the failure of some colors to be readily adaptable for translucent signs, questionable effect of materials such as gasoline, alcohol, lacquer thinner, etc., which might readily be used for cleaning—particularly around gasoline stations—and atmospheric conditions.

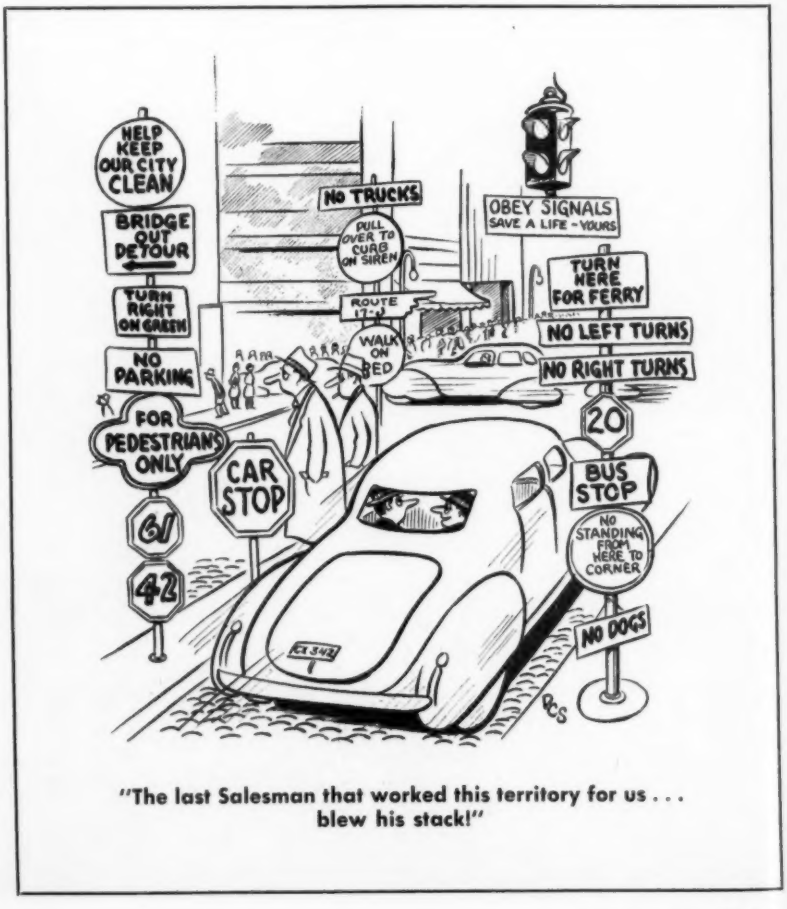
Improved organic finishes came in for some attention on the basis that they were used for a great many high production signs that are not expected to serve as "permanent" sign faces.

All in all, it looks like good healthy competition between producers of signs of porcelain enamel, plastics and organics. There appears to be good business for all, and a sound aggressive *selling* job will be the ultimate answer in many instances.

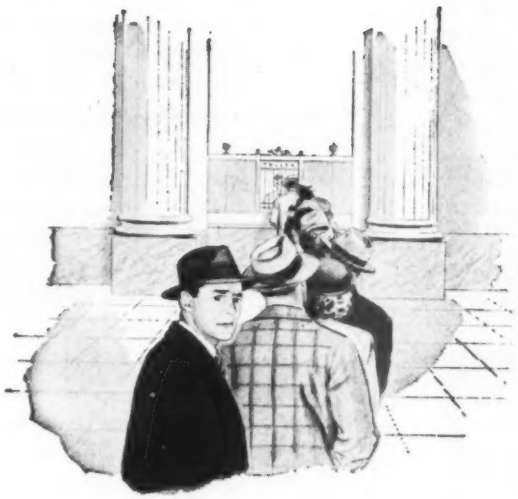
It was interesting to note that in the NESA exhibit there were 12 exhibitors of plastic signs and 4 exhibitors of porcelain enameled signs.

New sign division chairman

O. W. Maddox, vice pres.-sales, Texlite, Inc., was named chairman of the Sign Division of the Porcelain Enamel Institute for 1949.



"The last Salesman that worked this territory for us . . . blew his stack!"



THIS IS HARD

BUT THIS IS EASY

AND THIS IS MIGHTY WONDERFUL

SURE, you believe in saving.

But it's mighty hard to make yourself take cash out of your pocket, and time out of your day, to do it regularly.

The sure way, the *easy* way to do your saving is to get started on an *automatic* savings plan with U. S. Savings Bonds. Like this . . .

1. **If you're on a payroll,** sign up in the Payroll Savings Plan, then forget it. From then on the money saves itself—so much per week, or so much per month.

2. **If you're not on a payroll,** sign up at your bank for the Bond-A-Month Plan. Equally easy. You decide how much you want to put into bonds every month, your bank does the rest.

In just ten years after you start buying bonds, your money starts coming back to you—well-fattened! Every $3 you invest today brings you back $4 to make possible all the wonderful things you dream of doing.

And remember—any time you need your money for emergencies, you can get it back in minutes, without losing interest.

Automatic saving is sure saving—U.S. Savings Bonds

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